



Class _____

Book _____

COPYRIGHT DEPOSIT







THE ALAMO, SAN ANTONIO
"Thermopylae had her messenger of defeat; the Alamo had none"

THE BOOK OF TEXAS

BY
H. Y. BENEDICT
AND
JOHN A. LOMAX
OF THE UNIVERSITY OF TEXAS



FULLY ILLUSTRATED

GARDEN CITY NEW YORK
DOUBLEDAY, PAGE & COMPANY
1916

F386

F46

Copyright, 1916, by
DOUBLEDAY, PAGE & COMPANY

*All rights reserved, including that of
translation into foreign languages,
including the Scandinavian*



\$3.00

JUN 19 1916

©CL.A 431519

no. 1

PREFACE

Written for the general reader, this book makes no pretence to avoid colloquialisms or to be serious throughout. Jokes and stories that throw light upon Texas and her people have been freely inserted. But nothing of a humorous flavor has been put in for its own sake only, because, as far as may be accomplished within the narrow compass of a single volume, an earnest effort has here been made to describe Texas. As a consequence, the following pages abound in statements of fact. This book is less than a scientific and detailed treatise; on the other hand, let us hope, it is more than a collection of random remarks made by superficial and facetious observers.

That perfect truth has been attained in stating facts is not to be expected. The subject is so vast and varied, the sources of information are so numerous and scattered, and in cases so unreliable, that mistakes and omissions are practically unavoidable. Doubtless many specific errors may be discovered in what follows; doubtless some matters have been given too much space and others too little. In spite of defects all too obvious, in spite of having been written from the biased standpoint of Texans, this book has been prepared with very careful attention to Things as They Are. It is possible to hope, therefore, that Texas has been de-

scribed, inadequately of course, but with reasonable faithfulness.

Necessity has forced too much dealing with material things. Art, music, literature, are still in their infancy. It is only recently and partially that Texas has emerged from the pioneer stage. Even industrial Texas is as yet but a young Hercules. There are, however, the healthy beginnings of an intellectual and artistic life, all of the flowers of civilization are preparing to burst into bloom. The shadows of great events are being cast in advance; to-day promises a still more glorious to-morrow.

A book of this character can claim but little originality. All of its facts, many of its opinions, most of its jokes and anecdotes, have been gathered from sources too varied to be more than partly acknowledged in a list of names to be found in the Appendix. Much information has been obtained in letters from persons intimately acquainted with certain details.

“They knew ’e stole, ’e knew they knowed.”

The only merits that this book may possibly possess must depend upon the selection and arrangement of the material, upon the presentation of big and little facts in proper proportion, upon a truthfulness that makes no effort to hide faults or to display virtues.

“Prefaces ever were and still are of two sorts: . . . still the author keeps to his old and wonted method of prefacing, when at the beginning of his book, he enters, either with a

PREFACE

vii

halter about his neck, submitting himself to his reader's mercy whether he shall be hanged or no; or else in a huffing manner he appears, with a halter in his hand, and threatens to hang his reader if he gives him not his good word." As dear Elliott Coues once wrote, the authors desire neither to hang nor to be hanged; they wish they were better than they are for their own sake; they wish their book were better than it is for their reader's sake.

CONTENTS

	PAGE
PREFACE	v
INTRODUCTION	xvii

PART I

THE ANNALS OF A STATE

CHAPTER	PAGE
I. UNDER SPAIN AND FRANCE	3
II. THE COMING OF THE PEOPLE	10
III. PEACEFUL DEVELOPMENT	28

PART II

THE PEOPLE

I. THEIR NUMBER AND DISTRIBUTION	43
II. THEIR NATIONALITY AND CHARACTERISTICS	52

PART III

THE COUNTRY

I. THE LAND	63
II. THE CLIMATE	76
III. THE WILD LIFE	89

PART IV

THE WORK OF THE PEOPLE WITH THE PRODUCTS OF THE LAND

I. OCCUPATIONS	109
II. AGRICULTURE	118
III. KING COTTON	129

CHAPTER	PAGE
IV. FROM CORN TO CAULIFLOWERS	150
V. TEXAS CATTLE IN FREE-GRASS DAYS	166
VI. FROM HORSES TO BEES	189
VII. TURNING THE WATERS	200
VIII. HARVESTING THE TIMBER	209
IX. MINING	218
X. MANUFACTURING	233
XI. TRANSPORTATION	241
XII. THE TRADE OF THE CITIES	261
XIII. EXPORTS AND IMPORTS	270
XIV. THE MATERIAL WEALTH OF TEXAS	275

PART V

PROGRESS AND ITS PROBLEMS

I. BANKING	283
II. THE GRANGER MOVEMENT	304
III. FARM TENANTRY	324
IV. COMMUNITY LIFE	339
V. THE CITIES AND TOWNS	354
VI. EDUCATION	362
VII. THE CHURCHES	384
VIII. THE NEWSPAPERS	400
IX. UNION LABOR AND LIFE INSURANCE	405
X. PROHIBITION AND LOCAL OPTION	410
XI. WOMEN'S ORGANIZATIONS	414
XII. THE CASE OF THE RAILROADS	423
XIII. POLITICS AND POLITICAL LEADERS	429
APPENDIX	447

LIST OF ILLUSTRATIONS

The Alamo, San Antonio	<i>Frontispiece</i> ✓ <i>Facing Page</i>
A Typical Fort Worth Residence	22
A View of the Alamo Plaza, San Antonio	22
Prominent Texans	23
Albert Sidney Burleson	
Thomas Watt Gregory	
Edward M. House	
V. W. Grubbs	
Robert Scott Lovett	
Prominent Texans	30
R. Waverly Smith	
John H. Kirby	
Geo. W. Brackenridge	
R. M. Johnston	
George W. Littlefield	31
Granite Mountain Near Marble Falls	66
Southern End of Elephant Head, Brewster County.	66
Southeast End of the Diablo Mountains, El Paso County	67
Sotol or Bear Grass, an Abundant Desert Plant of the Agave Area .	67
A Typical Barb Wire and Mesquite Post Fence	82
Grand Falls in Winter	82
The Trinity River at Lock and Dam No. 1	83
A View of the Trinity River Near Dallas at Flood Time	83
Indian Blankets on the Campus of the A. & M. College of Texas .	86
A Photograph of Wild Deer Made in Southwest Texas	86
Rain Lilies on University of Texas Campus, Austin	86
The Green Juicy Leaves (Really the Stems) of the Cactus Bear	
Large, Protective, Needlelike Spines	87

	<i>Facing Page</i>
Selective Breeding Has Given Rise to a Spineless and Stickerless	
Cultivated Cactus	87
A Mexican Singeing the Spines and Stickers from the Growing Wild	
Cactus with a Gasolene Torch	87
Cattalos, Palled Angus Half Breeds from Buffalo Cows	94
Three Texas Insects with Bad Reputations	95
Two Foes of the Texas Farmer	102
A 2,000 Pound Ray Fish Caught off Galveston Jetties	103
A Day's Catch of Silver King Tarpons	103
Irrigated Cotton in the Lower Rio Grande Valley	130
A Typical Example of the Country Gin	130
A Cotton Patch After the Leaves Have Dropped and Exposed the	
Opened and Unopened Bolls	131
Platform Loaded with 7,863 Bales of Cotton at Compress at Tex-	
arkana	146
A Texas Industrial Congress Demonstration Crop of Corn	147
Feterita on the State Experiment Farm at Chillicothe	150
Six Tons of Alfalfa per Acre	151
Sudan Grass, State Experiment Station	151
Hauling Sugar Cane to Market, Lower Rio Grande Valley	151
Loading Potatoes in Field Near Houston	151
Cabbage in the Rio Grande Valley in March	158
Gathering Lettuce Near San Benito	158
Twenty-eight Halbert Pecans in Three Clusters Grown on Buds	
Three Years Old	159
Fig Tree of H. G. Stilwell at San Benito	166
Chinese Jujubes from the Orchard of F. T. Ramsey and Sons,	
Austin	166
Grapefruit in the Rio Grande Valley	167
"And Woe to the Rider, and Woe to the Steed, Who Falls in Front	
of the Mad Stampede".	168
A Few Surviving Longhorns	169
Water Tank and Cattle	169

LIST OF ILLUSTRATIONS

xiii

Facing Page

Hereford Cattle and Cowboys Taking It Easy at a Water Hole in the Panhandle	172
A Modern Ranch with Comfortable Houses and Barns Not Far from Fort Worth	173
Mexican Cattle Fording the Rio Grande as They Are Being Driven into Texas	174
Cattle Swimming Through a Dipping Vat	175
Buyers and Sellers Examining Cattle at the Fort Worth Stock Yards	178
Santa Gertrudis, Near Kingsville	179
Thanksgiving Turkey Trot, Cuero, Texas	194
A Uvalde County Apiary	195
Flume, 26 by 11 Feet, on the Rio Grande	200
Reinforced Concrete Flume on Main Canal Near Mercedes	200
Irrigating Onions at Harlingen	201
One of the Shallow Artesian Wells at Lubbock	201
Medina Irrigation Co. Dam	201
Typical Longleaf Pine of the Texas-Louisiana Region	204
Cypress Swamp	205
Long Train at the Deweyville Plant of the Sabine Tram Company .	205
Transporting Longleaf Yellow Pine Logs by Water in Southeast Texas	205
The Beatty Well at Spindletop	226
A Few of the 1,200 Derricks at the Spindletop Oil Field	227
Oil Tank on Fire at Beaumont	230
Man-way, Mine No. 5, American Lignite Briquette Co., Big Lump, Milam County	231
Salt Basin, Guadalupe Mountains in the Distance, El Paso County	238
Pumping Sulphur Out of the Ground	238
Pecos High Bridge, Southern Pacific Railroad	239
A Portion of the Texas and Pacific Tracks at Fort Worth	242
Hauling Wool to Kerrville	243
Galveston Causeway	243
Oil and Lumber Going Out at Port Arthur	243

LIST OF ILLUSTRATIONS

	<i>Facing Page</i>
A Partial View of Fort Worth	258
View in Business Section of Dallas	258
Panoramic View of Downtown Section of Houston	259
Looking North Over the Central Business District of the City of San Antonio	259
Large Reinforced Concrete Office Building Built by Brig. Gen . Anson Mills, U. S. A	274
The Busch Building, Dallas	274
The Amicable Insurance Building	274
Rice Hotel, Houston, Texas.	275
Henry Exall	306
Prize Winners in Texas Industrial Congress Crop Raising Contests	322
Gordon E. Norman	
Wallace McGehee	
Emma D. Stokes	
J. L. Norris	
Andrew Carey	323
Billie Minter	
Edna and Louise Taylor	
Annie Lou Darby	
Main Building and Cadet Corps of Agricultural and Mechanical College, College Station, Texas	370
University of Texas Library	370
Carnegie Library, Fort Worth, Texas	371
Rosenberg Library, Galveston, Texas	371
Prominent College Presidents	386
Edgar Odell Lovett	
F. M. Bralley	
W. B. Bizzell	
Samuel Palmer Brooks	
Dr. R. J. Hyer	
Prominent Ministers	387
Rev. R. E. Vinson	

LIST OF ILLUSTRATIONS

xv

	<i>Facing Page</i>
Rev. George W. Truett	387 ✓
Rev. W. D. Bradfield	
Rev. James M. Kirwin	
San Fernando Cathedral, San Antonio	402 ✓
George B. Dealey	403 ✓
Dallas <i>News</i> Building, Dallas	403 ✓
Two Prominent Texas Women	418 ✓
Mrs. Helen Marr Kirby	
Mrs. Percy V. Pennybacker	
Old Style Texas Court House	419 ✓
New Type of Concrete Court House, Edinburg, Hidalgo County	419 ✓
Governor James Stephen Hogg	440 ✓
Governor James E. Ferguson	441 ✓
Maps will be found in the text, on pages: 46, 57, 64, 65, 66, 67, 71, 72, 77, 90, 93, 144, 210, 412.	

INTRODUCTION

“If you could git on a perch som’ers and see things like dey really is an’ not like dey seem to us, I be boun’ you’d hol’ yo’ breff an’ shet yo’ eyes.”—*Uncle Remus*.

Fortunately for the reputations of those who write or talk of Texas, it is next to impossible to tell lies about her; almost anything that may be said is true somewhere, some time. Tell of beetling cliffs where eagles scarce may find a perch and of plains so level that rainwater cannot drain away, tell of sudden cloudbursts and of almost endless droughts, of huge crops and of famine, of boiling heat and freezing cold, of luxuriant woodlands and bare deserts, of immense cattle ranches and small truck farms, of flourishing cities and uninhabited wastes, of soil without rocks and rocks without soil, of long railways and trackless plains, of dry rivers and turbid floods, of jewelled humming-birds and repulsive vultures, of tropic fruits and northern pines, of pistol-toting desperadoes and self-sacrificing preachers, of beautiful libraries and towns without books, of million-dollar hotels and dirt-covered dugouts—tell a thousand contradictory things about Texas, and if you seem to lie it is not because of what you have said but because you have told only a part of the truth. George Washington, had he been a Texan, would have found it doubly impossible to tell a lie about Texas.

Stretching halfway from Mexico to Canada and a third of the distance from the Atlantic to the Pacific, covering a twelfth of the United States, rising in elevation from sea-level to almost 9,000 feet, ranging from quite humid to quite arid and from 115° in the shade to 16° below in the sun, possessing thousands of square miles of desert and millions of acres of soil of unsurpassed fertility, blessed with a fair proportion of mineral wealth, located at the meeting of East and West, reaching south almost to the Tropics, containing most of the great life zones of North America, sparsely inhabited by some four millions of people, rapidly increasing in population and wealth and civilization, Texas is a land of amazing contrasts.

It is quite the fashion in Texas to speak of "our imperial commonwealth" and to compare it in size with New England and other lesser portions of the surface of the earth, greatly to the implied disadvantage of many excellent regions. In fact, Texas exceeds New England in area, with New York, Pennsylvania, New Jersey, Delaware, Maryland, and the two Virginias thrown in for good measure. Texas is slightly larger than Austria-Hungary or England and France, or England and Germany, appreciably larger than Spain and Portugal, over twice as large as Italy, and almost exactly three times as large as Great Britain. Such are the comparisons dear to your patriotic Texan, who never says anything about Arabia which is over four, or about Brazil which is just twelve, or about Siberia which is nearly twenty times

as large as Texas. In arranging a contest it is well to pick your opponent with care.

From Texarkana in the northeastern corner to El Paso in the western it is farther than from New York to Chicago. The distance from Brownsville in the southern corner to Texline in the northwestern exceeds that from Tampa to Washington. Take a map of the United States and with a pair of compasses stretched from Texarkana to El Paso draw a circle with Texarkana as a centre; perhaps you will be astonished to see the circle cut across Lake Michigan. Use the distance from Brownsville to Texline as a radius and El Paso as a centre, and the circle runs far out into the Pacific Ocean. Made into a square, Texas would have sides a little over five hundred miles in length. Texas is not as long as, but is much broader than, California, her nearest competitor in area among the states. She exceeds California in size by more than 100,000 square miles.

A fearsome combination of spiny cactus and thorny shrub, of stinging lizard and vinegarroon, of centipede and rattlesnake, of Gila monster and black tarantula, of large red ant and "hydrophobia" skunk, may be selected from the Texas fauna to make a witches' cauldron amply sufficient to petrify gullible greenhorns and long-eared tourists with terror. Yet if accident insurance companies were to insure, "free, gratis, and for nothing" against damage from these unpleasant natives they would not lose much money. Killing noxious animals when he meets them, picking its thorns

from his skin when he accidently collides with a cactus, the Texan goes on his way rejoicing and unharmed. Mocking-birds singing in feathery mesquites, vultures soaring at vast altitudes in cloudless skies, scissor-tail fly-catchers quarrelling in mid-air, lark sparrows scattered over the short grass prairies, doves cooing endlessly everywhere, chaparral birds running across the roads, killdeers by the ponds, cattle grazing or at rest under the "mottes" of trees with cow birds about them, rabbits crouching by the roadside, prairie dogs barking on their mounds, thousands of acres of prairie flowers, millions of yellow blooming mesquite and still yellower huisache, tall pine forests and duck-covered swamps, fields white with the opening cotton and golden with the ripening wheat and corn and oats, cattle on the prairies, pecan and other trees along the river banks where sits the summer fisherman, tarpon leaping six feet out of the Gulf when hooked by the skilful angler, buttermilk and corn-bread and thick pot-licker, soft breezes blowing over hill and dale, hot mid-days and cool nights, long summers and short winters, bull-bats booming at dusk, frogs and crickets and katydids and mocking-birds and chuck-will-widows and owls crying in the night, hundred-pound watermelons and long juicy roasting ears, "garden truck" without limit in amount or variety—to such things the Texan is accustomed. As everywhere, in Texas good and bad are to be found contemporaneously and successively, the rose and the thorn go together, and, as once said by a postprandial Texas orator,

“The song of the mocking-bird keeps me from hearing the boll weevil bowling at the cotton-boll.”

Varied the land and various the people! Viewed here and there by Spaniards and Frenchmen of the age of exploration, dotted sparsely with Spanish missions in the eighteenth century, Texas was left almost entirely to the aboriginal Comanche, Apache, Karankawa, Tejas, and other Indian tribes until the nineteenth century was well under way. Then in ever-increasing swarms came the Anglo-American, bringing his colored Afro-American with him, and the inevitable conflict between the English and Spanish civilizations, thus brought into contact, broke out almost at once, and resulted in Texas soon becoming one of the United States. Six flags have waved over Texas—the fleur-de-lis of France, the banner of Spain, the flag of the Mexican Republic, the Lone Star flag that floated when Texas, alone among her sister states, was for a brief space an independent republic; the Stars and Stripes of the American Union; and, for a short while only, the Stars and Bars of the Southern Confederacy.

Of the Indians less than one thousand are left. To the few Spaniards and Mexicans and Americans of the days of the Republic of Texas immigration has added a mighty swarm of Southerners and a large number of Northerners, Germans, Bohemians, English, Irish, Italians, Swedes, and a sprinkling from every other European country. From these, of course, have come many native Texans. The state is

more "American than the United States as a whole, despite the fact that one-sixth of the population is negro and another sixth is German and Mexican. The earliest European inhabitants were Spanish soldiers, monks, and pioneers; the next were American frontiersmen. These last were quickly followed by settlers from the older states, by Germans and more Americans. All came as a part of that westward movement whose story is the major part of American history. All came because a fair land offering golden opportunities lay spread before them, and for the same reason many others yet unborn will come. American with a large European element, Southern, of course, rather than Northern in flavor, but with a strong spice of the West, Texas stands to-day—as described by Yancey Lewis, one of her noblest and truest orators—a "great commonwealth, marked out by area, by climatic conditions, by physical environment, and by the indwelling spirit of its people, for empire," a "huge leviathan among the states, not yet articulate, not yet having the unity of its highest purpose, nor wrought to its best hope, but destined ultimately, in my view, to speak with the strongest and most individual voice of all our states."

As best it can this book tells of Texas. A complete, even an approximate, description is impossible; the totality included under the name of Texas is too vast to be arranged in correct proportion and woven into an easily intelligible and therefore not overcrowded picture. To depict Texas however dimly in a single volume it is necessary to paint with a

broad brush and yet sometimes to show important details with the truthfulness of a miniature. A true account of the coming of her people into the broad land of Texas would be a great epic; a true picture of the work of her people to-day would be a gigantic panorama. All that this book can hope to do is to present, inadequately but not untruthfully, some lines of the epic and some scenes of the panorama; to deal briefly and imperfectly with big and significant things without neglecting details that possess local color and human interest.

PART I

THE ANNALS OF A STATE

“And across the lonely prairies there comes a tale of woe
From Guadalupe’s azure tide to the fatal Alamo.”

—*Frontier Song.*

CHAPTER I

UNDER SPAIN AND FRANCE

"By various influences and agents the Past is summoned before us, more vivid than a dream. The process seems as magical as those whereof we read in fairy legends, where circles are drawn, wands waved, mystic syllables pronounced. Adjured by these rites, voices speak, or forms and faces shape themselves from nothing. So, through certain influences not magical at all, our brains are made to flash with visions of other days."—*Owen Wister*.

ONE hundred years ago there was scarcely a handful of white men in that section of North America now known as Texas, and these were not permanent settlers. The entire region was virgin soil populated only by Indians and a few Spanish soldiers, and overrun by wild cattle, mustang ponies, countless herds of buffalo, deer, antelope, wolves, and other wild animals. The passage of a century has converted the vast region west of the Mississippi into states, Texas alone containing four and a half millions of people and seven billions of wealth. To describe the raw material, the people, and the land; to picture the transformation that has been wrought in Texas during this time, particularly in its important and dramatic aspects; to trace, however inadequately, in small compass the result of the action of the people upon the land and its resources, and the results of the action of the people upon themselves until they have won some individuality and definable characteristics, is what the writers of this volume have undertaken. It is the old and well-known story of man either conquering or adapting himself to the forces of nature.

Conventional history is too often inclined to concern itself mainly with dates, wars, and with the names and careers of military and political leaders, together with incidents which have little or nothing to do with the real development of a country. Texas, for example, is perhaps no whit different from what it would have been had La Salle not explored it in early times and died within its confines, or had the Spaniards Cabeza de Vaca and Coronado not wandered over its trackless plains in the early years of the seventeenth century. Even such men as Stephen F. Austin and Sam Houston, however important their place in history, did not make Texas. The destiny of a state is seldom embodied in one man. In the first place, the state is what it is because of the natural conditions that have existed; and, in the second place, because of the general character of the people who have settled within its borders.

The records of any historian, however impartial, must nevertheless of necessity seem a form of hero worship. In the history of Texas many individuals stand out above their fellows as superior in bravery, in resourcefulness, and in other qualities of leadership. However hard we try to set down the bare facts, the halo of romance creeps into the story and glorifies such names as La Salle, the restless Frenchman; Coronado, the enterprising Spanish gold hunter; Stephen F. Austin, the patient, unselfish father of a new republic, who died early in life through exposure in her service; Travis, the commander of the group of heroes in the Alamo; General Sam Houston, brave and impassioned leader of men, in defeat taciturn as an Indian; Mirabeau B. Lamar, gifted orator and friend of enlighten-

ment through public education; O. M. Roberts, the "Old Alcalde" and "Pay as You Go" Governor, Chief Justice of the Supreme Court, law professor in the University of Texas; John H. Reagan, Postmaster-General of the Confederate Cabinet, Member of Congress, U. S. Senator, first head of the Texas Railroad Commission; James Stephen Hogg, Texas' greatest Governor, progressive statesman, and friend of the people; George W. Brackenridge, Henry Rosenberg, and William M. Rice, philanthropists; Henry Exall, evangel of scientific farming; T. V. Munson, honored by the French Government for achievement in grape culture. To the memory of the men who founded colleges in places where the Indian war whoop yet sounded; to those who preached the gospel, who healed the sick, who framed the laws, who cleared the land and blazed the way for the millions who now live between the Rio Grande and Red rivers—romance and story and song and drama will yet arise, fit and commensurate.

The events that have affected the lives of a people, the difficulties they have overcome, the deeds they have wrought, the battles they have fought, the institutions they have set up—all these help us to know what the people are. The annals of a people faithfully recorded make the past live again and show us, if not the people themselves, the results of their actions. So, poring over the story of their brave deeds and peering behind the framework of governmental and social machinery they have invented, inherited, or modified; the record of their war with nature and their clashes with each other, we may come to know

/

something of the real people. The Earth and the People: what the Earth held in store and what the People did with its riches and to each other,—these are the vital elements in history, the moving pictures of the past thrown on the screen that enable those of the present to vision what has gone before. Let us see first how Texas was possessed by the white race and by what means the peoples were welded into that semblance of unity which is termed a state.

Some of the incidents are mentioned partly because they occurred in Texas territory and not because they influenced the life of the state as it now is. In setting them out we shall consciously emphasize the particular contributions that Texas seems to have made to the sum total of human progress. The general growth of the state has been, on the whole, not unlike that of other Western commonwealths. It does, however, possess some individual characteristics. For example, six different flags have waved over its fortunes, one of them the Lone Star while Texas was for nearly ten years a free and independent republic; her independence was won by a successfully waged revolution; the state has maintained until now a citizen soldiery known as the Texas Rangers. The Railroad Commission, a widely copied homestead law, the commission form of government, a lavish land and bonded endowment for the free public school system, are other illustrative examples of noteworthy contributions. So the story shall be interlarded with references to what Texas has originated, that the narrative may not lose its declared intention of singing the glories of the state.

Within thirty-five years after Columbus discovered America the first white man set foot on Texas soil. He belonged to an exploring party of Spaniards, Conquistadores, men of like mold with Cortez and his companions, who sailed from Cuba and were wrecked on the coast off Galveston. Other Spanish gold-hunting bands traversed portions of Texas during the next century and a half, but made no efforts to establish permanent settlements. In 1682 La Salle, a Frenchman, coming down from Canada to the mouth of the Mississippi River, set up a claim to all the land (Louisiana) drained by the river. Later driven west in a storm while he was trying to reach the mouth of the Mississippi from France some of his ships were lost, and the others returned to France. He thereupon built Fort St. Louis, the first attempt at a permanent settlement in Texas. La Salle was afterward killed by one of his own men. Others of his party died of smallpox and malarial fever, were killed by the Indians, or murdered each other in the diverting pastime of duelling. So thoroughly was the site of his fort ultimately lost, after the Spaniards burned it, that a college professor only rediscovered it in 1914. The French made other more permanent settlements in Louisiana and Alabama which later gave La Salle's claim to the Mississippi Valley real standing. Northeast of La Salle's Texas fort lived the Tejas (Ta'has) Indians, who for some time harbored four of his unfortunate companions, and whose tribal designation finally grew into the name of Texas. Among these Indians Spanish priests, sent with the Spanish soldiers who destroyed Fort St. Louis, built a church on Texas soil, the first of a chain of mission church buildings, the beautiful ruins of some yet serving

as attractions for tourists. Along with these missions established to Christianize the Indians, the Spaniards sometimes built forts, as at San Antonio, to hold the country against the French. In east Texas the forts at Nacogdoches and vicinity were abandoned, the first time because of the attacks of the French from Louisiana, and again in 1762, when France ceded to Spain her claim on all the region west of the Mississippi River. Seventeen years afterward the Spaniards again took possession of Nacogdoches. Nearly two hundred years of occupation had, by 1800, yielded only the net results of three permanent settlements in Texas,—San Antonio, Nacogdoches, and Goliad, the latter being the legitimate offspring of Fort St. Louis. What barren results and of what insignificant influence on the development of Texas—when it really started to grow!

When France regained the territory ceded to Spain and sold it to the United States in 1803, its western boundary was uncertain. In 1806 an agreement between General James Wilkinson, that picturesque rascal who commanded the United States army in the west, and General Herrera established a neutral strip between the Arroyo Hondo and the Sabine. This No Man's Land thereafter became a convenient and safe harborage for adventurers and desperadoes who in their expeditions into Texas brought back information about its advantages that made others covet its possession. Independent forays were organized by different groups of these restless characters in efforts to take Texas away from Spain, while about the same time the French pirate, Jean Lafitte, found Galveston Island a safe harborage. Lafitte and his pirates and the men that infested No Man's Land did two

things for Texas: they introduced knowledge of it to the United States and they first gave it the bad name which added undue weight to a famous remark made by Phil Sheridan after the Civil War, while he was stationed in an arid locality in Texas.

CHAPTER II

THE COMING OF THE PEOPLE

"I have never stooped to any man, and when I am in my grave . . . bury me with my face to the setting sun. I have been all my life travelling westward and I want to face that way when I die."—*Brit Bailey's Epitaph.*

TEXAS was not settled by Americans through forcible occupation. Just before Mexico won its independence from Spain, in 1821, Moses Austin secured permission through the Spanish Governor at San Antonio to bring three hundred families to Texas. His son, Stephen F. Austin, a young man twenty-seven years of age, carried out the contract, offering each settler six hundred and forty acres of choice land at twelve and one-half cents an acre. These families he settled on the Brazos River, one of the three principal streams in the state, about one hundred miles from the Gulf of Mexico. After Mexico had gained her independence from Spain a general law was passed inviting immigration to Texas. To every married man was offered a league of land (4,428 acres), while a bonus of 23,000 acres was given to anybody who would bring with him one hundred families. Austin, the first to undertake the work, made contracts to bring in an additional fifteen hundred families, while a dozen other contracts for a smaller number of families were made by other individuals. At least one enthusiast petitioned to settle one hundred and fifty Mexican families in the state. The greater number of these colonists were from Tennessee, Mississippi, Alabama, and Georgia; though some

came from New York, Pennsylvania, Virginia, and Ohio. People of all classes came. The Southern cotton planter moved due west overland in covered wagons, called prairie schooners, bringing with him his slaves; the Northern man came seeking opportunity for his son; the "poor white trash" of the South came hoping to escape the social and economic disadvantages of the densely populated slave communities. Along with these journeyed lawyers, doctors, merchants, blacksmiths, and enough adventurers to perpetuate the story that Texas was a land of desperadoes. Within fifteen years after the time Austin secured his grant there were probably not less than thirty thousand Americans in Texas. The settlements were mainly located below the old military road which ran from San Antonio to Nacogdoches, and along the bottoms or lowlands of the San Antonio, Guadalupe, Colorado, Brazos, and Trinity rivers. At this time Texas was a part of the State of Coahuila, the capital being first Saltillo and later Monclova. The state was under the control of a governor and legislature elected by the people, Texas having as her superior officer a political chief who lived at San Antonio. The principal officer in each town was the alcalde, whose duties included, roughly, those of mayor and justice of the peace. Being so far removed from the central government in the City of Mexico, the colonists naturally ran their affairs very much as they pleased. Their relatives were usually in the United States, and their correspondence, visits, and trading were chiefly in that direction. When they had children to educate they sent them back to their old homes. No very strong ties, therefore, were formed with their adopted country.

And when trouble came, as it was bound to come quickly, with two so widely diverse civilizations brought into close contact, the sympathy of the people of the United States was with their friends and neighbors who had so recently become citizens of an alien country. Within five years after reaching Texas, the group of colonists who settled near Nacogdoches organized a revolution and planned a free and independent state, to be called Fredonia. This revolution quelled, the Mexican Government, in order to reduce emigration from the United States, first issued a decree (which it immediately suspected, as far as Texas was concerned) freeing the slaves, the principal asset of the cotton planter; the law of 1830 forbade absolutely, with certain exceptions, the coming of more Americans to Texas; the same law proposed to settle convicts permanently in the state, and soldiers were stationed at various strategic points to intimidate the settlers. An especially obnoxious provision of this law provided for the levying of import duties on all goods except those that came from Mexico. Again it is seen how easily the anger of a people can be aroused through what they deem to be unjust taxation. When the people rose and imprisoned the revenue collectors and drove out from Texas the Mexican soldiers that had been stationed there, punishment would certainly have been visited upon them save for the fact that Mexico was undergoing a revolution in which Santa Anna was the victor. The success of the Texans, however, strengthened their contempt for the Mexicans; it gave them confidence in themselves and probably brought them substantial encouragement from friends in the United States. Soon afterward Sam Houston wrote a constitution

for Texas, one of the provisions of which separated it from Coahuila, and this constitution was forwarded to Mexico to be presented in person by Stephen F. Austin to Santa Anna. As a result of this journey Austin was thrown into prison for fifteen months. The indignation of the Texans over his detention in a dark dungeon, and the action of Santa Anna in stationing soldiers in Texas and ordering several prominent citizens to be sent to Mexico for trial, aroused the entire people to such a pitch of indignation that only the force of arms could settle the issue. When the peace-loving Austin returned from Mexico in 1835 he announced in a circular letter: "War is our only resource. There is no other remedy but to defend our rights, ourselves, and our country by force of arms."

It required only fifteen years to show that free-born Americans could not live under the edicts of a tyrannical Mexican dictator. The people who had come to Texas up to that time were of the typical frontier type, restless, red-blooded folk, unused to oppression, impatient of restraint of any character; widely different in religion, in their notion of popular education, and in the freedom of the individual, from the people under whose rule they attempted to live. Moreover, from the first the two peoples mutually distrusted each other, and for the dark-skinned, low-caste Mexican a Southern man, in particular, had little more genuine respect than he did for the negro slave. As one of the early settlers writes in his reminiscences, he thought the "Mexicans little better than monkeys."

But the Texans faced a serious situation. The Mexican Government under the rule of Santa Anna had a large stand-

ing army, a part of which immediately crossed the Rio Grande. After San Antonio had been captured by the Texans, and several skirmishes had been fought, Santa Anna besieged San Antonio with a large army. William B. Travis, who was then in command of the Texans at that point, took refuge in the Alamo, a part of an old mission which still remains standing. With him were such men as Bowie, of the family that gave its name to the bowie knife; David Crockett, only recently come from Tennessee, and one hundred and ninety other men of similar spirit and determination. Surrounded and besieged with little hope of rescue, Travis sent out this call for help:

*Commandancy of the Alamo,
Bejar, Feb'y 24th, 1836.*

To the People of Texas and all Americans in the world.

FELLOW CITIZENS AND COMPATRIOTS: I am besieged by a thousand or more of the Mexicans under Santa Anna. I have sustained a continual bombardment and cannonade for 24 hours and have not lost a man. The enemy has demanded a surrender at discretion, otherwise, the garrison are to put to the sword, if the fort is taken. I have answered the demand with a cannon shot, and our flag still waves proudly from the walls. *I shall never surrender or retreat.* Then I call on you in the name of Liberty, of patriotism, and everything dear to the American character, to come to our aid with all dispatch. The enemy is receiving reinforcements daily and will no doubt increase to three or four thousand in four or five days. If this call is neglected, I am determined to sustain myself as long as possible and die like a soldier who never forgets what is due to his own honor and that of his country. **VICTORY OR DEATH!**

WILLIAM BARRET TRAVIS, Lt. Col. Comdt.

P. S. The Lord is on our side. When the enemy appeared in sight we had not three bushels of corn. We have since found in deserted houses 80 or 90 bushels and got into the walls of 20 or 30 head of beeves.

TRAVIS.

Ten days later, on March 6th, the Mexicans made a general assault. When it was over not a Texan was left alive, while around the Alamo were the dead bodies of six or seven hundred Mexicans. The chapel of the Alamo still stands, a holy spot for Texas patriots. The sacrifice of Travis and his brave companions has been embalmed in the stirring words "*Thermopylæ had its messenger of defeat; but the Alamo had none.*" Two weeks later Colonel Fannin and four hundred men surrendered to an overpowering Mexican army near Goliad. A few days afterward they were marched out and shot down.

The fall of the Alamo and the massacre at Goliad convulsed the settlers with fear. They fled from their homes in terror before the advance of Santa Anna's army, now separated into three divisions marching eastward at a considerable distance from each other, Santa Anna himself being in command of the main and central division. Before him, Gen. Sam Houston and his Texans retreated until, the invaders being separated from the chance of quick reinforcements, Houston met the Mexican army in battle a short distance down the bayou from the present city of Houston. Here 800 Texas militiamen with little military training charged 1,300 Mexican soldiers on the afternoon of April 21, 1836, giving as their battle cry, "*Remember the Alamo! Remember Goliad!*" In half an hour 600 Mexicans lay dead, 730 were either wounded or captured, while the Texans lost only two killed and twenty-three wounded. Santa Anna himself was among the prisoners.

The battle of San Jacinto was the Yorktown of Texas; it won the independence of the Texas Republic. April 21st

is yet a legal holiday as well as March 2d, when the Independence of Texas was declared. The concluding words of this Declaration of Independence are:

“We therefore, the delegates, with plenary powers, of the people of Texas, in solemn convention assembled, appealing to a candid world for the necessities of our condition, do hereby resolve and declare that our political connection with the Mexican nation has forever ended; and that the people of Texas do now constitute a free, sovereign, and independent republic, and are fully invested with all the rights and attributes which properly belong to independent nations; and, conscious of the rectitude of our intentions, we fearlessly and confidently commit the issue to the decision of the Supreme Arbiter of the destinies of nations.”

Some of the indictments in the same historical paper read:

“It [the Mexican Government] has failed and refused to secure on a firm basis the right of trial by jury, that palladium of civil liberty and only safe guarantee for the life, liberty, and property of the citizen. It has failed to establish any public system of education, altho’ possessed of almost boundless resources (the public domain), and, although it is an axiom, in political science, that unless the people are educated and enlightened it is idle to expect the continuance of civil liberty or the capacity for self-government. It has demanded the surrender of a number of our citizens and ordered military detachments to seize and carry them into the interior for trial, in contempt of the civil authorities and in defiance of the laws and the constitution. It denies us the right of worshipping the Almighty according to the dictates of our own conscience, by the support of a national religion

calculated to promote the temporal interests of its human functionaries rather than the glory of the true and living God. It hath been during the whole time of our connection with it the contemptible sport and victim of successive military revolutions; and hath continually exhibited every characteristic of a weak, corrupt, and tyrannical government. The necessity of self-preservation now decrees our eternal political separation."

In the "Consultation" held just prior to the convention that declared the independence of Texas, three commissioners were selected to go to the United States and ask for aid. Aid did come, and many of the men who died in the Alamo, who were murdered at Goliad, and a few who fought with Houston at San Jacinto, were volunteers who had come into Texas as a result of the commission's call for help. Indeed, the United States army afterward gave material aid indirectly by sending General Gaines and a detachment of soldiers to Nacogdoches in order to keep the Cherokee Indians in east Texas from rising while the settlers were busy restoring their homes destroyed by the invading Mexicans.

Little need be added to this brief account of the Texas revolution. Its causes are plainly apparent: the two peoples could not mix, and the law of the "survival of the fittest" operated here as everywhere else. The Mexican mind and character would have to be made over before it would be competent to rule a people whose birthrights are the Anglo-Saxon notion of civil liberty and the Anglo-Saxon conception of individual freedom. Even had Santa Anna temporarily driven the Texans from the land, so fair a country having

been once seen and coveted, the tide of American immigration would have soon again swept westward and overwhelmed all opposition to its possession.

For nearly a decade the Republic of Texas exercised the ordinary function of a free and independent nation. Every three years it elected a president and a vice-president, the president not being eligible to successive reëlection. It maintained a congress and a judicial system; it supported an army and a considerable navy and sent diplomats to various foreign countries. Naturally the United States was the first country to recognize the independence of Texas; this recognition being followed by the Netherlands, France, and England. England manifested a keen interest in Texas throughout its independence, an interest that has been interpreted as a desire to possess the country. Many citizens of the republic were immigrants from England. The financial concerns of that country also held a large amount of Mexican securities; then, too, England no doubt desired to control a region capable of producing cotton for her mills, and Texas from the beginning was recognized as an ideal cotton-growing state.

But before the government could be put into smooth running condition, order had to be brought out of the chaos resulting from the Mexican invasion. The people who had fled returned to find their homes burned to the ground, their cattle and crops destroyed. But the Anglo-Saxons came back, as they generally always do. The captured Mexican soldiers were retained as prisoners for a year, while a treaty was made with Santa Anna (which the Mexican

government repudiated) providing for the independence of Texas; then, despite the fact that he had personally ordered the storming of the Alamo and the wholesale murder at Goliad, he was after a time set free. His return to Mexico marked the beginning of years of trouble from the southwest.

In September, 1836, the people of the Republic voted, with only ninety-one dissenting ballots, their assent that Texas should be annexed to the United States. At the same time they ratified a constitution, and for President chose Sam Houston, the hero of San Jacinto, over Stephen F. Austin, the Father of Texas. The constitution made liberal provision for the support of the government, allowing the President a salary of \$10,000 a year in contrast to the \$4,000 salary now paid to a Texas Governor. President Houston found himself facing a public debt of more than a million dollars, which, despite his economies, largely through the policies of President Lamar, had increased to twelve million dollars by the close of the Republic. From its beginning the government was poor in ready cash but rich in land. Indeed, like many Texans in later years, the government was really "land poor"; for there could be little sale of immense tracts of the public domain when the government gave away six hundred and forty acres to every married man who would settle on it and three hundred and twenty acres to every unmarried man. It also gave to each county fifteen thousand acres and presented to the public schools and to its state university then and later splendid landed endowments amounting to many millions of acres.

When the battle of San Jacinto was fought there were probably thirty thousand Americans in Texas and about fifteen thousand Indians. During the ten years of the Re-

public the white race increased to one hundred thousand, while the great majority of the Indians were either killed in battle or driven from the country. Much of the public debt, which increased rapidly during this time, arose from maintaining a frontier defense against the incursion of hostile Indians, sometimes incited by Mexican leaders; and from invasions of Mexican soldiery in the desultory war carried on between Texas and Mexico practically throughout the whole period.

By 1850 the population of the state was 200,000. The influx of people had come mainly from the Southern States and from the central portion of the Eastern States, though at the same time a considerable number of German immigrants had settled in various sections of the Republic. Some counties in Texas are at this time mainly populated by a German citizenship, and in a few instances practically only the German language is spoken in good-sized towns, Fredericksburg and New Braunfels being two examples. Despite the law that the English language shall be taught in every public school in the state, there are yet some backwoods German communities which teach only the German language. A like practice is followed by the Mexicans in a few of the Rio Grande border counties where even the court records are kept in the Spanish language.

The Texans, by winning their independence from Mexico practically single-handed and unsupported, achieved a glory which is the pride of their descendants. It cannot be said, however, that the ten years of their maintenance of an independent republic was markedly successful. The war was not of sufficient duration to weld the different communities

into one people. The rapid influx of immigration brought additional distracting problems. The troubles with the Indians and with Mexico continued throughout the period. During Lamar's administration an ill-starred invasion or two of Mexico resulted not only in great loss of life but also in adding to the public debt. The Santa Fé expedition into New Mexico, in order to establish Texas' claim to all the land east of the Rio Grande (more than half of the present State of New Mexico), proved disastrous. During most of this period Mexico herself was disturbed by the continuous revolt of factional chieftains; otherwise the lot of the new Republic would not have been so easy. A crowd of adventurers from Texas at one time crossed over the Rio Grande in an abortive attempt to found an additional nation in the northern part of Mexico to be known as the Republic of the Rio Grande. During this period Mexico twice invaded Texas, San Antonio being each time captured. In return an army of Texans, which came to be known as the Mier Expedition, invaded Mexico. After its capture the Texans were again subjected to an example of Mexican cruelty. Each one of the 176 men was required to draw a bean from a bag in which every tenth bean was black, the rest being white. The seventeen men who drew black beans were then taken out and shot.

The dread of Mexican invasion and domination kept annexation talk alive during all the days of the Republic. The slowness of the United States to act was due mainly to the disinclination of the men in power at Washington to further complicate the slavery situation by annexing Texas with the possibility of having a slave state cut into four or five states

each with two United States Senators. Another consideration that gave the United States Government pause was the fact that the annexation of Texas meant certain war with Mexico. Early in the year 1845, however, Congress acted favorably on the proposition, and on July 4th of the same year a convention of delegates met at Austin, Texas, to decide whether Texas should accept annexation. Alarmed at the course of affairs, Mexico offered to recognize the independence of Texas and make peace if Texas would refuse the offer of the United States Government. No attention was paid to this offer, and the Texans voted to accept the proposition of the United States. Under the terms of the agreement Texas was to retain all of her public domain, while the United States Government declined to assume the state's public debt of ten million dollars.

The three presidents of the Texas Republic were Sam Houston, a Tennessean, who served for two non-successive terms; Mirabeau B. Lamar, a Georgian, and Anson Jones, a New York man. Houston was not only the hero of the war of independence but had also served as a member of Congress and as Governor of Tennessee before coming to Texas. For a number of years he had lived as a member of a tribe of Cherokee Indians, where he gained experience that was extremely valuable to him in dealing with the Indians while he was President of the Texas Republic. Despite Houston's rigid economies the Indian and Mexican policies of President Lamar involved the Republic in heavy debt. When Texas was admitted to the Union there was outstanding more than twelve millions of dollars of paper money that had been issued by the Republic.



A TYPICAL FORT WORTH RESIDENCE
Home of a Texas cattleman



A VIEW OF THE ALAMO PLAZA, SAN ANTONIO
The post office and an office building in the background



PROMINENT TEXANS

ALBERT SIDNEY BURLESON

Copyright by Harris & Ewing

Postmaster-General of the United States

THOMAS WATT GREGORY

Copyright by Harris & Ewing

Attorney-General of the United States

EDWARD M. HOUSE

Copyright by Underwood & Underwood, N. Y.

Adviser of President Wilson

V. W. GRUBBS

The man who made possible the Girls'
Industrial College at Denton

ROBERT SCOTT LOVETT

Copyright by Gessford

General Counsel for the Harriman
Railroad System

The famous homestead law, said to have been first prepared by Isaac Van Zandt, who left numerous descendants in Texas, was passed during Lamar's administration, and has been widely copied throughout the United States. Under the original law a person was allowed to keep his home, a definite number of acres, his furniture and tools, five cows, a yoke of oxen or a horse, twenty hogs, and provisions for a year. The present Texas homestead law, to the great distress and disadvantage of the homesteader's creditors, exempts business property that may be occupied by a skyscraper.

While President Lamar may be justly charged with being an unwise financier, he will be known for all time in Texas history as the constant and strong friend of public education. It was during his administration that a law was passed setting aside a body of land to each county to be held in trust for the public schools. President Lamar's eloquent communications to his Congress on the subject of education are yet models of wise foresight and statesmanlike grasp of the value to the state of an intelligent citizenship. A part of one of his periods is yet printed on every catalogue and pamphlet sent out by the University of Texas: "Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire."

Despite, however, the influx of new citizens, the prosperity of the people, the richness of Texas soil, and the opportunities for establishing a free and independent and ultimately great Republic, Texans rejoiced at again becoming citizens of the mother country from which they had gone out into the wilderness. Texas cheerfully swapped its President for a

Governor, its Congress for a Legislature, disbanded its army, transferred its navy, recalled its ministers, abandoned its custom houses, ceased issuing money, and became a member of the sisterhood of states, soon to be plunged into a serious war with Mexico, wherein 8,000 Texas soldiers fought. The peace of 1848 transferred to the United States a territory which now embraces California, Nevada, Utah, and Arizona, and, besides, parts of New Mexico, Colorado, and Wyoming. Thus Texas indirectly brought as her marriage portion a considerable body of territory, and the annexation of the state in connection with attendant consequences was one of the most important steps ever taken by the United States Government.

The claim of Texas to that portion of New Mexico east of the Rio Grande River aroused a good deal of bitter feeling on the part of many citizens,—a complication finally settled by an agreement in which the United States paid to the state ten million dollars in return for its claim to New Mexico, this money to be used in paying the state's debts. This was done and all trouble avoided. Settlers from every state east of the Mississippi River, though in larger numbers from the Southern States, forded the Red River by thousands. As there were no railroads, the most of them came overland, driving mule or ox teams and riding in large covered wagons. Some took the water route down the Mississippi River, reshipping from New Orleans to Galveston or other Texas ports. The first railroad in the state was built in 1856. To encourage railroad building the state government lent the companies money from the public free school fund, giving sixteen sections of land or 10,240 acres for every mile of track completed. But

the outbreak of the Civil War stopped all railroad building. After the war the state concessions to the railroads were not quite so generous.

Coming usually from a timbered country, the immigrants to Texas naturally settled along the rivers where wood was abundant. The settlements started near the Gulf and gradually extended northward. It was first supposed that only the bottom lands were suitable for cultivation, and it was some years before the rich, level, and open uplands of the state were utilized for any purposes except for pasturage. In the "black waxy" region of the state the lands are at the present time much more valuable than the lowlands of the river bottoms. The early settlers thought that they would not only starve but that they would freeze to death if they built their cabins anywhere else except in the timbered stretches along the rivers.

Hardly a decade of peaceful statehood had elapsed before the people of Texas, along with the rest of the country, were in the midst of exciting controversies preceding the Civil War. When the question of secession came up for discussion Sam Houston, who was again the chief executive officer in Texas, vigorously opposed it. He was thereupon removed from office, and the convention called for the purpose voted to secede from the Union by a majority of 166 to 8. During the Civil War Texas furnished probably 100,000 soldiers to the Southern army. The history of this war will prove that they were good though sometimes reckless fighters. Their youthful recklessness is well illustrated in the story of a captain of cavalry, one George B. Zimpleman, who, on a bet that he could perform the feat, lassoed a Federal cavalry

officer while that gentleman was busy trying to kill him with his revolver, and brought him into camp, the Confederate meanwhile refusing to use any weapon at all except his cowboy rope. After arriving in camp Zimpleman apologized profusely to the captured officer because the astonished Federal had suffered a broken arm when the lasso jerked him from his horse. Another episode which is set out in various histories of the war tells how Galveston as well as a number of ships were captured by a fleet of improvised Confederate war vessels which had their decks piled with cotton to protect the riflemen. This new brand of warship was known as "Cotton Clad."

Because of its far removal from the centre of combat in this war, Texas suffered less than any other Southern state. Indeed it is yet a boast of the people that every landing of Federal soldiers on Texas soil resulted in failure. Though invasions of the state were attempted at Sabine Pass, at Galveston, and at Brownsville, they were rendered fruitless through the resourceful intrepidity of the Texans' defense. Being free of invasions, the work of raising crops, internal commerce, and other industries went forward. Numerous manufacturing plants were also an outgrowth of war conditions, and active trade with Mexico further rendered the position of Texas more fortunate than any other one of the seceded states. When the war ended and the Federal soldiers finally took possession, the proclamation freeing the negroes was made June 19, 1865, thus establishing a negro holiday known as the "Juneteenth," celebrated each year in fitting style throughout the state by the black man and all his people.

Gen. Phil Sheridan was a Federal officer whose duty it

was to impose the harsh military rule of reconstruction days on the people of Texas. His enforcement of the letter of that rule, with whatever amendments suggested themselves to him, made the lot of Texas as unhappy as any state in the South. Her duly-elected officers were forcibly removed, her laws disregarded, and the rights of her citizens shamefully trampled on in a thousand ways by the edicts of military men. A radical legislature, which remained in session continuously for twelve months, by its reckless waste of public funds increased the tax rate 1,400 per cent. in four years. But civil quiet and a fair degree of contentment again succeeded when Richard Coke, afterward distinguished as a United States Senator, upon being duly elected took forcible possession of the office of Governor in 1874, despite the appeals of Governor E. J. Davis to President Grant. The reconstruction constitution of 1869 was speedily annulled and a new constitution, known as the Constitution of 1876, under which the state is now operated, was adopted by a convention of legally qualified delegates and later ratified by the people.

CHAPTER III

PEACEFUL DEVELOPMENT

“ Brave old Mackenzie long has laid him down
To rest beside the trail that bears his name.
A granite mountain makes his monument;
The northers, moaning o’er the low divide,
Go gently past his long-deserted camps.
No more his rangers guard the far frontier;
No more he leads them in the border fights;
No more the mavericks’ winding stream of horns
To Kansas bound; the dust, the cowboy songs
And cries, the pistol’s sharp report; the free,
Wild days in Texas by the Rio Grande.”

—*Border Ballad.*

THE story of the state’s growth since the days of reconstruction is reflected in other chapters in this volume, and is not greatly dissimilar to that of other Southern states; for, while preserving much of the spirit of the old South, Texas is really a Western state. The problems Texans are called on to solve are alike throughout the West. Following the war came immigrants in ever-increasing numbers; the era of the small farmer was ushered in; railroads were built; towns began to put on city airs; the long period of quiet, which yet continues, gave the people an opportunity to examine themselves, instead of watching the man outside, and to determine what was best for the state and for themselves. Frontier protection against the Indians and outlaws, the development of an efficient system of public education, the distribution of an immense public do-

main, the proper control of public service corporations, the establishment of a system of courts, problems of public finance, the labor movement, the granger movement, the prohibition question—all these matters, and many others, have been discussed by the press, on the hustings, and by the fireside, though the demands of this chapter require only a few to be mentioned.

Governor Richard Coke was authorized in 1874 to equip a battalion of mounted men of six companies of seventy-five men each, for protecting the frontier against Indians, Mexicans, or other desperadoes. This body of men came to be known as Texas Rangers, and is still provided for, although its numbers have been greatly reduced. Acting both as a peace officer and as a military man, the ranger, who is usually chosen for his courage, horsemanship, and ability to shoot straight and to shoot quick, has exercised an important influence in extending the frontier boundaries of Texas. Where the ranger camped the settler was not afraid to follow close at his heels, for the wild man and the bad man and the mad man fled as the ranger approached. When Mr. Roosevelt got ready to organize his regiment of Rough Riders in the Spanish-American War, he came to San Antonio, Texas, in the heart of the ranger country, in order to be convenient to the class of men that he wished to lead against the Spaniards. He once said of "Bill" McDonald, a prominent ranger captain and now United States Marshal for the Northern District of Texas, that this particular individual would take pleasure in charging hell armed only with a bucket of water. The ranger service in Texas is under the immediate control of the Adjutant-General of the state. The men are divided into

four or five small companies which for a number of years have been kept camped in the different parts of the Rio Grande country. Until recently the border counties between Oklahoma and Texas were in as great need of protection as the Rio Grande region.

Governor Charles Culberson, in his message to the legislature dated January 16, 1895, said: "It has become common for the Government to aid certain classes of industries by bounties, protection, and other species of unequal laws, and under this impetus individual fortunes have grown to such gigantic proportions that conservative and thoughtful men are appalled at the enlarging power of concentrated capital." In Texas the operations and results of bounty giving was illustrated most exasperatingly by the railroads. The railroads had been needed to develop the country, but it cannot be doubted that in many cases, at least, high prices were paid for them. The total bounties in land to the railroads in the state amounted to 39,000,800 acres, 22 per cent. of the total acreage of the state, an area equal to the entire State of New York. About a third of this, however, was eventually forfeited back to the state. Too late the people came to see that the railroads had cost perhaps too much. Their practical freedom from all laws, their immense wealth, and the ease with which their interests could be combined made railroad men of the Jay Gould type careless of the wishes or the rights of the people. Big competing lines, therefore, suspended all competition and formed combinations in disregard of the law. Watered stocks were issued by the millions. High rates, special rates, rebates, and poor service characterized every road



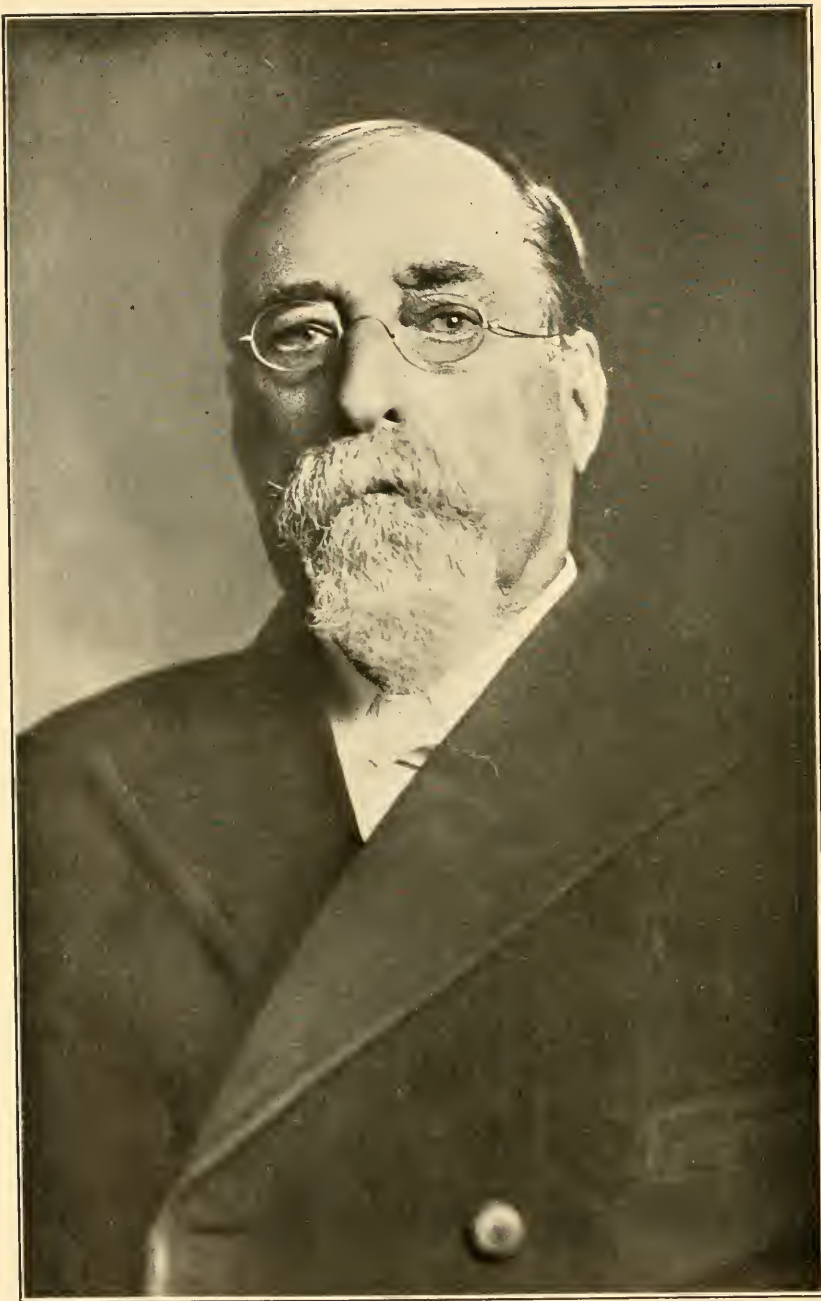
PROMINENT TEXANS

R. Waverly Smith, Banker and Lawyer,
Galveston

John H. Kirby,
Houston

Geo. W. Brackenridge, Banker,
San Antonio

R. M. Johnston, Editor *Houston Post*,
Houston



Photograph by Jensen's Studio

GEORGE W. LITTLEFIELD
Stockman and banker Austin, Texas

in Texas. To bolster up such indefensible practices free passes were issued to every officeholder in Texas whose functions could in the slightest way embarrass the railroads in their exercise of arbitrary powers. Governor Hogg, who from the late eighties led in the fight against unjust practices of the railroads, said in an address in 1901: "I proved by the railway officials that the railway line from Jefferson to Greenville cost its owners \$7,000 a mile to build it; that they got from the state 10,240 acres of land to the mile; that they sold this land for more than enough to pay for building the road; that they issued \$12,000 of bonds and stocks per mile on the road; that they ran it many years and maintained it in fine condition; that in 1880 they sold it to other parties for \$9,000 in cash a mile, which included the stocks and bonds. The new purchasers immediately placed stocks and bonds on the road for \$35,000 per mile, thus making a clean profit on the face of the transaction of \$4,000,000. Later on the new management cut down the train and track service, reduced wages of the employees, and raised traffic rates out of reason; then within six or seven years it ran down the road from a good one to such a reckless state that no one could get an accident ticket over it."

It was Governor Hogg who, while Attorney-General of Texas, began to prosecute the railroad companies for violations of the law. He also fought for a law creating a Railroad Commission in Texas and finally saw it placed on the statute books in 1891. He then induced Senator John H. Reagan, who had framed the Interstate Commerce law for the United States, to resign as United States Senator and

become the first chairman of the Railroad Commission. This commission, with the power to classify freight and fix the rates for railroads and express companies, and with ample authority to enforce the obedience of the railroads, has exercised a great beneficial influence. Intrastate rates have been reduced and equalized, a good deal of water has been squeezed out of depreciated bonds, and the railroads forced to improve their roadbeds and rolling stock, and to build comfortable depots. "The most important results," says Prof. Charles S. Potts, "achieved by the state through the work of the Railroad Commission has been the almost complete abolition of discrimination between persons and places and of the fluctuations in rates due to competition and rate wars. Steady and uniform rates are of more assistance to the business community than low rates, and these two qualities have been secured in large measure as a result of the Commission's work."

To John H. Reagan, a notable figure in Southern as well as local state history, is most largely due the present standing of the Texas Railroad Commission; for it does yet stand high even though more than once positions on the commission have been attained by persons whose conspicuous fitness rested largely on their ability to employ political claptrap to mislead voters. But Reagan enjoyed the confidence and respect of all. He tried, while protecting the interests of the people, to treat the railroads fairly. He became known as the "square deal" man—a title richly deserved.

Governor Hogg thought that the allied question of the unrestrained issuance of stocks and bonds by railway companies to be almost as important as the Railroad Commission issue.

He showed that the railroads had outstanding against them \$455,000,000 in stocks and bonds, an amount equal to one-half of the value of all the property within the state, including the railways themselves. At the same time his exhibits proved that railways were rendered for taxation for \$63,000,000 or about one-eighth of their indebtedness. Under the law passed as a result of this agitation the Railroad Commission was given power to regulate all future issues of stocks. "The stock and bond law," says Professor Potts, "has not only decreased the issuance of fictitious stocks and bonds, but has actually resulted in the decrease of the average amount of the outstanding securities per line of mile. This result is worthy of remembrance in view of the fact that the last twenty years has seen a marked increase of the outstanding capitalization on the other railroads in the United States. The average amount of capital stock per line of mile in Texas has been reduced from \$15,000 in 1894 to \$8,000 in 1913, or a decrease of more than 44 per cent. The bonded indebtedness per line of mile has been reduced from \$25,700 per mile to \$23,200, or a decrease in the mortgage debt of nearly 10 per cent. The total amount of both stocks and bonds has been reduced from \$40,800 in 1894 to \$31,600 in 1913, or a reduction of more than 22 per cent." The average decrease in value is due both to the low valuation of new roads and to the fact that old roads, as their securities mature, are not allowed to bond again so freely.

It should not be forgotten that the regulation of railroads in Texas was instituted and finally effected largely through the persistent courage and forceful advocacy of one man—

James Stephen Hogg. Even after he retired from the Governor's chair he continued to combat the evils which he thought were practised by the railroads. Because of his activity, comparatively few people in Texas travel on passes. One of his contentions—namely, that unwarranted issues of stocks and bonds should be declared invalid—has never been brought to pass. Other men have, of course, assisted in the work accomplished in Texas, but to Governor Hogg must in large measure be given the honor of relieving a situation that had become unbearably oppressive.

“Next to the introduction of railroads,” said Governor Roberts, “barbed wire has done most to develop the agricultural and pastoral pursuits of the state.” But barbed wire, as did the railroads, brought its troubles. The fencing of large bodies of land into one pasture by the cattleman—and he not seldom fenced land other than his own—brought irritation and discomfort to the small stock grower and to the farmer. Fence cutting became so common that Governor Ireland in 1884 convened the legislature in special session and passed laws against the fence cutters, which finally put an end to the practice.

The waste in disposing of the public lands of Texas was stopped in 1887 by a law which provided that farming land could be sold to actual settlers only, in amounts ranging from 160 acres to 640 acres. The terms were most liberal, and purchasers had forty years' time to pay for their land, at an interest rate of 3 per cent., with only the first payment and the annual interest actually required until the end of the forty years' period. At the same time each person was allowed to purchase four sections of grazing land in the

arid section of the state. Under the operation of this law less than 2,000,000 acres of public land in Texas remain unsold. This, however, does not include more than 2,000,000 acres yet held by the university, the most of which is leased to cattlemen for grazing purposes. Again, under the leadership of Governor Hogg, legislation was enacted affecting public lands held by large land corporations, many of them non-residents. In 1890 such corporations owned about 40,000,000 acres of Texas lands, or one-fourth of the entire state. A law was enacted prohibiting further acquisition of land by corporations, and requiring the lands then owned to be sold within fifteen years. The lands of refractory corporations were to be sold by judicial proceedings. A second act provided that no alien or person not a resident of the United States should thereafter acquire title to any Texas land, exception being made to lands in incorporated towns or cities.

Another subject that has agitated the minds of the people at different times is the question of state-wide prohibition. In 1887, after an exciting discussion in which the leading orators of the state were pitted against each other, the matter was voted upon. The result of the vote was 129,270 for and 220,627 against prohibition. Again, in the summer of 1911, the subject was submitted to popular vote. The debates, while vigorous, were more good-natured, the vote standing, for prohibition, 231,096, against prohibition, 237,363. At the present time, as for some years past, the prohibition question is recognized as the paramount issue in the Democratic party, the two leading candidates for Governor always occupying opposite sides on this question,

with the prohibitionists seemingly gaining steadily in numbers. The present Governor, James E. Ferguson, announced as a prominent plank in his platform that he would veto any liquor legislation, pro or anti, passed by the legislature. The people vindicated his judgment that they were weary of having the prohibition question a factor in state politics, for he was triumphantly elected, and the succeeding legislature was remarkably free from heated discussion growing out of this question. Nor was the Governor called upon to make his word good, as he without doubt would have done.

That local option sentiment is growing becomes more apparent if one studies the increase in the number of counties voting local option. At the present time 186 of the 252 counties are entirely "dry," while 49 are partly "dry." Probably 70 per cent. of the people live under well-enforced local option laws. A general law provides that no intoxicating liquors can be sold or drunk on a railroad train in Texas; a 9:30 closing law is very generally observed, and a Sunday closing law is strictly enforced.

One of the relics of radical rule days was a public debt of \$5,000,000 which, through the business acumen of Governor Roberts, was either settled or comfortably funded. Governor Roberts was also at the head of the commission that built the present state capitol, said to be at the time of its erection one of the six largest buildings in the world. It cost the State of Texas three million acres of land, and is 560 feet long by 280 feet broad. When the Spanish-American War broke out Texas sent to the front, or as far to the front as they could get, five regiments of infantry and

one of cavalry. In addition a lot of her cowboys and college students joined Mr. Roosevelt's Rough Riders when that noted organization was formed in San Antonio.

During the last twenty years Texas has suffered considerably by storms and floods. In the matter of flood rivers the Brazos is the worst offender. In the summer of 1889, again in 1902, and still again in 1913, this river overflowed its banks, along which, especially below Waco, there lies some of the finest cotton acreage in the world. Frequent floods have, however, taught the people the value of levees. Under special legislation levee districts have been formed in many localities, levee bonds voted, and much valuable land afforded protection. Galveston has been the chief sufferer by storms. The first one came in 1900, destroying 6,000 lives and millions of dollars' worth of property. Again, in 1915, another terrific storm swept the coast, bringing almost as heavy loss of property, but destroying only a few lives. The great Galveston sea wall, built partly by the courageous people of that city and partly by the National Government, held staunchly, and the city was saved.

Out of the first Galveston disaster came at least one blessing—the commission form of government—which has not only been adopted by practically every important incorporated town in Texas, but also by many other cities of the United States. R. Waverley Smith, a banker and lawyer of Galveston, conceived the commission idea for city government. He, with others, realized, after the calamitous storm, that a small, efficient group of men could best do the work of rebuilding a stricken city. Under the

prevailing system incompetent, perhaps venal, persons could be elected. The experiment was suggested by the dire necessities of the situation, and Mr. Smith drafted that section of a new charter which gave extraordinary powers to five men. The legislature granted the charter after declining to approve the provision allowing the Governor to appoint the commission. Under its operation all powers of the city are placed in the hands of five men selected by a popular vote. The commission plan of city government, organized and first tried out thoroughly in Texas, seems destined to be as widely copied as her homestead law.

Since the time of Governor Hogg the people of Texas, except in the matter of the prohibition question, have not been greatly agitated about matters of state reform. They have paid more attention to national issues, such as free silver, imperialism, and our relations to Mexico, than to state problems. Questions of court procedure, judicial reform, public education, public health, improvement of public buildings and public roads, the introduction of manufacturing enterprises, the price of cotton, coöperative marketing, rural credits, tenantry, etc., have interested special groups at different times, and some of these problems are still far from solution; but the larger body of the people have not become excited over any one or combination of them. It may be safely said that the people of Texas generally believe that the United States should intervene in the Mexican situation, but there are really very few who favor this intervention should it require force of arms. The reputed warlike spirit of Texas is largely the work of imaginative

newspaper correspondents or the irresponsible utterances of ambitious politicians.

These annals are confessedly incomplete. Other chapters give details of some of the things that it was necessary to omit. From the Civil War period down to the present the state has been blessed with peace and prosperity. Its growth in population, in enlightenment, and in wealth, has been rapid and continuous. There is yet room for more people, and they are coming by trainloads. Texas is no paradise, but it is a good place to live in. Its history has been eventful and honorable. Its future, who can prophesy?

PART II—THE PEOPLE

“But the heroes pressed on for the prize to be won,
Through the dust of the overland trail.”

CHAPTER I

THEIR NUMBER AND DISTRIBUTION

"Let us pledge ourselves, as Texans, to love the truth and seek it, to learn the right and do it, and, in all emergencies, however wealth may tempt or popular applause allure, to be rulers of our own free speech, masters of our own untrammelled thoughts, captains of our own unfettered souls."—*Yancey Lewis*.

RAPID as has been the rate of increase in the population of the United States at each decade since its admission to the Union, that of Texas has been even greater. The rate at which the people have come in by birth and migration is shown by the following table, where the population predicted for 1920 is based on the supposition that the increase in population between 1910 and 1920 will equal that between 1900 and 1910.

GROWTH OF THE POPULATION OF TEXAS

<i>Year</i>	<i>Population</i>	<i>Percentage of Increase</i>	<i>United States Percentage</i>
1850	210,000	184	36
1860	600,000		
1870	820,000	94	30
1880	1,590,000	40	25
1890	2,240,000	36	21
1900	3,050,000	28	21
1910	3,900,000		
1920	4,750,000		

The density of population, sixteen per square mile, one person to every forty acres, is about half the average for the United States. Texas is more thickly settled than the

"Mountain States," or the Dakotas, and is just about as thickly populated as Florida, Nebraska, Oregon, or California. Less than twenty thousand whites in 1835, more than three and one-half million in 1915, is the record of eighty years.

The average number of persons to a family is 4.9, which, compared with Uncle Sam's average of 4.5, shows that race suicide is not as popular in Texas as in some other places. A favorite remark in the arid country is: "The baby crop is the certainest one we have." This crop, however, has decreased relatively very much since frontier times, the decrease being especially marked in the towns, which have in proportion to population only two-thirds as many children as the country. Compared with Massachusetts, the birth rate seems to be half again as large, which is one of the reasons why there are forty-six people only in every hundred in Massachusetts, and sixty in Texas, under twenty-five years of age. Approximately, there are five persons to a dwelling, from which fact it is easy to see that apartment and tenement houses have not yet risen in large numbers. In crowded New York City, for example, there are sixteen persons to a dwelling, thirty-one if Manhattan Borough alone is considered. Naturally, nearly all of the dwellings occupied by more than one family are in the towns, over half of them being in the eight largest cities.

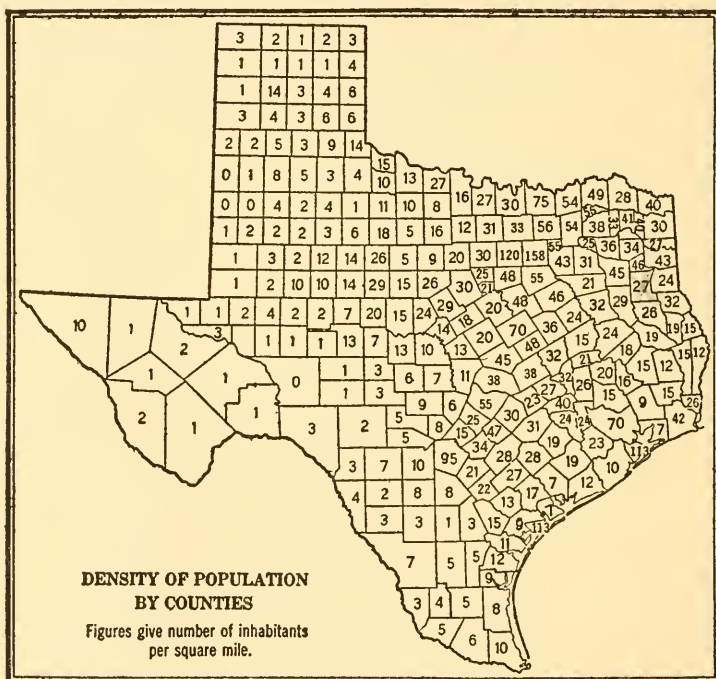
When we are told that only one-sixth of Texas has been plowed and that most of this sixth is not cultivated at all intensively, the population possibilities begin to dawn upon us. More than half of Texas is fertile soil, and, allowing two acres to a person, 40,000,000 people, the present population

of France, becomes a probability of the not very distant future. Dallas County, the most densely populated area, with ten times the average density, is not yet as thickly populated as Pennsylvania, nor half as thickly as Massachusetts or Germany or New Jersey. As yet Texas is not causing New York any uneasiness as to first place in population; but observe the results of the race so far between the states at each twenty-year interval: Texas was twenty-fifth in 1850, nineteenth in 1870, seventh in 1890, and fifth in 1910. Ohio will be the next to see Texas pass her on the way to first place, which, being long-winded, Texas is sure to reach, and, reaching, sure to hold forevermore.

The density of population by counties ranges from one person for each ten square miles to 158 a square mile. It is possible to pass from crowded city blocks through spreading suburbs and small farms to large pastures where houses are many miles apart. To understand at all the distribution of population in Texas it will be necessary for even the casual reader to look at the accompanying population map in connection with the geological map on page 67 and the map of the natural life zones on page 90. Unless to do so strains too much the mind of the reader, these maps should be imagined superposed upon one another.

Such a superposition reveals the fact that the Black Prairie is the most densely populated portion of the state, with about fifty persons or more to the square mile. Eastward the density decreases slowly, northeast Texas being fairly uniformly occupied with some thirty-five people to the square mile; westward the density thins rapidly at first and slowly afterward, with the exception of an increase

in the heart of the Red Beds country; southwestward it thins slowly till the boundary between the Humid and Mesquite Zone is reached, where there is a rapid thinning out, exception being made of San Antonio, which is the commercial capital of a vast, thinly settled region to the south and west; southeastward toward the coast the



density thins slowly, exception being made of the Beaumont-Orange and Houston-Galveston centres, each due to railroads, harbors, lumber, oil fields, and various other causes. The most sudden drop in population is encountered crossing westward a long S-shaped line that runs between Bexar and Cook counties. This S is a geological line which marks the surface boundaries of the Upper and Lower Lime-

stones in south central Texas, the Lower Limestones and the Coal Measures in north Texas.

Rainfall and soil have been the main factors in locating all of the rural population and most of the urban. Much timber has had some effect as a deterrent, requiring work to remove it. The long-leaf pine area is clearly marked as one of sparse population: where so many fine trees grow there is little room left for people. Considerations of health have attracted people from the moist east to the dry west. When a malarial mosquito bites an east Texan and starts him to "chillin'," he forgets his superabundant fruits and vegetables, and the dry country looks good to him; but when he gets there, he yearns for the east Texas rains. Hence oscillations of population which were marked in early days, and still are to some extent, by the passing along the roads of "prairie schooners," canvas-covered wagons, loaded with wife, children, and household effects, and followed by more children, horses, dogs, mules, cows, and calves. Every now and then the immigrant stuck up signs expressive of his disgust, "Nine inches to hell!" "Sixty miles to water!" and "Damn this country!" being favorites. Obviously one can't have all the delights of clear, dry weather while it is raining, or cheap land in a thickly populated country. The booster of any particular town or county usually has plenty of good things to say about it, some true and some o'er-gilded by a luxuriant and not always disinterested imagination; but a happy prosperity is easily possible anywhere in Texas if one works with and not against nature.

The extreme contrasts that exist between the different portions of Texas are the subjects of much good-natured

repartee. The prairie man derides the man who lives "in the sticks," while the man from the timber country replies with derogatory references to windmills and jack rabbits. The east Texan admits that he has sand between his toes; the Trans-Pecos man says that water is so scarce in his country that some frogs there two years old do not yet know how to swim.

Texas is overwhelmingly rural: its smaller towns are small islands almost submerged in a great agricultural sea. At least two out of every three Texans live in the open country, and less than one in five in towns of more than ten thousand. The people, however, are moving to town: in 1900 there were fifty-six towns of over 2,500 people, in 1910 there were ninety-nine, and now there are more than a hundred. In the last twenty-five years the number of smaller towns has doubled, although their total population has merely kept pace with the general growth in numbers. It is the larger towns that are growing so much faster than the country. The growth in the country and smaller towns for the last census period was 19 per cent.; in the towns and cities above 2,500 in population it was 68 per cent.; in the eight largest cities it was 77 per cent. (despite the fact that the great storm of 1900 caused the population of Galveston, one of the eight, to remain nearly stationary during the census decade); in the five largest cities it was 107 per cent. During the same period the towns above 2,500 in the United States showed an increase of 34 per cent., and the rest of the country an increase of 11 per cent. The towns and cities of the United States therefore increased proportionately three times as fast as the country: in Texas they increased

almost four times as fast. Yet so overwhelming is the proportion of rural population that an increase of 19 per cent. for it meant an absolute increase of 470,000, while an increase of 68 per cent. in the total population of the towns above 2,500 meant an increase of only 378,000. In the accompanying table the percentage distribution of the population of Texas into rural and urban is given and compared with that of the United States.

	TEXAS	UNITED STATES
Rural	66	44
229 small towns of less than 2,500	7	9
70 towns with 2,500 to 10,000	8	9
13 towns with 10,000 to 25,000	4	6
8 cities with over 25,000	15	32
	<hr/> 100	<hr/> 100

The four counties having the four largest cities showed population increases above 50,000, Tarrant County with 56,000 carrying away the banner. Three large agricultural counties—Washington, Fannin, and Fayette—showed decreases of about 7,000 each. All told, there were thirty-four agricultural or stock-raising counties that showed decreases in their population from 1900 to 1910, most of these counties lying near the centre of the southeastern third of the state. River overflows, boll weevils, and the call of the cheaper lands to the west were the causes of these losses, which have helped to increase so greatly the population of the northwestern half of the state. Here and there the towns have lost relatively to the surrounding country. Increased transportation facilities, especially the interurban electrics, are causing and will doubtless continue to cause

the cities to grow at the expense of their nearby towns. People from other states have been pouring into west Texas, into the Coastal Plain, and also into all other parts of the state. "Homeseekers' excursions" have been for years a regular part of the program of the railways.

Let us close this chapter somewhat irrelevantly with a number of scattered facts concerning the 252 counties of Texas. El Paso, with 5,570 square miles (about the size of Connecticut and Rhode Island combined), is the largest county, and Rockwall, with 140 square miles, is the smallest. There are three counties each about the size of Connecticut, and ten each larger than Delaware. The average county is nearly the size of Rhode Island. A great many of the counties are squares, with thirty miles to a side. Dallas County has the largest population, 150,000 or more, and Cochran has the smallest, about 100. The average county now has a population of about 18,000.

Although the counties of Texas in most cases have only arbitrary boundaries, the older counties particularly have individualities of their own, and there are printed histories of some of them. The Texan thinks of the counties in relation to the state in about the same way that he thinks of the state in relation to the United States. Larger senatorial or congressional districts have no such individualities, on account of frequent changes in their boundaries.

The counties of Texas are so numerous that nearly every person of any importance in Texas history has been remembered in naming them. Spanish governors, explorers, early settlers, statesmen and politicians, jurists, soldiers, and even three historians have had their memories thus per-

petuated. As if the learning of Texas political geography were not otherwise hard enough, there has been a confusing mix-up in the naming of towns and counties. Athens is in Henderson County, Henderson is in Rusk County, Rusk is in Cherokee County, and Cherokee—well, there are two or three Cherokees in as many counties. Aransas Pass is in Patricio County, while Rockport is in Aransas County; Beaumont is in Jefferson County, while Jefferson is in Marion. Austin is not in Austin County nor Bellville in Bell County nor Houston in Houston County nor Franklin in Franklin County; while Dallas is in Dallas County, El Paso in El Paso, Galveston in Galveston, and Gonzales in Gonzales. There is no regularity amid the irregularity, and one is reminded of those exceptions in the grammar which overshadow the rules. Worst of all, *Upland* is the county seat of *Upton*.

During the last decade there were some counties in the west that put to shame any percentages listed in usury laws. Several increased in population over 2,000 per cent., one over 6,000, one nearly 8,000, while Lynn County, by increasing from 17 to over 1,700 in population, carried off the prize at 10,000 per cent.

CHAPTER II

THEIR NATIONALITY AND CHARACTERISTICS

“ . . . the emigrants,
Who bore the westward fever in their brains,
The Norseman tang for roving in their veins,
Who loved the plains as sailors love the sea,
Braved danger, death, and found a resting place,
While traveling on the old Mackenzie trail.”

EVEN the Census Bureau does not try to analyze fully the constituent elements of our complex population. In the case of Texas, as in the case of the whole United States, it is impossible to trace the exact proportion of Irish or English or German in the whole mass of inhabitants. It is desirable here, however, to get some idea of the elements that make up the present population of Texas, and for that purpose the table appearing on page 53 will be found useful.

Europeans, particularly Germans, are now coming in rather slowly, but Mexicans are coming into Texas in large but as yet uncounted numbers. The percentage of “Mexicans born in Mexico” just given is for this reason perhaps too small. The percentage of “native Mexican Texans of Mexican Texan parentage” is only an estimate. Newcomer Mexicans avoiding war-smitten Mexico are now swarming all over the northern side of the Rio Grande Valley. A heavy immigration of “Americans” from the other states is also helping to increase relatively the natives of the United States with native parents of

NATIONALITY AND CHARACTERISTICS 53

	TEXAS	UNITED STATES
Native white Texans of American parentage...	46%	
Native white Texans, one or both parents born in Europe.....	<u>5%</u>	
Native white Texans	51%	
Native white Americans of American parentage	66%	54%
Native white Americans, one or both parents born in Europe	7%	21%
Native white Americans	73	75
Foreign-born Europeans	3	14
Native Mexican Texans, of Mexican Texan parentage	2%	
Native Mexican Texans, one or both parents born in Mexico.....	3%	
Mexicans born in Mexico	3%	
Mexicans	7	1
Negroes born in Texas.....	15%	
Negroes born in other states.....	2%	
Negroes.....	<u>17</u>	<u>10</u>
	100	100

European descent. This element formed 63 per cent. of the total population in 1890, 64 per cent. in 1900, and 67 per cent. in 1910. Texas has gained from other states about 850,000, and has lost about 350,000 (more than half of them to Oklahoma), making a net gain of 500,000, only persons now alive being counted.

It is clear that Texans stick pretty closely to Texas. The rather sudden opening up of Oklahoma to settlement after people were pretty thickly scattered around its borders caused, of course, a sudden draught that carried nearly 200,000 native Texans northward across Red River. In spite of this exodus, only one native Texan out of seven lives in the United States outside of Texas, and only one in

sixteen lives outside of Texas and Oklahoma. On the average in the United States, 22 per cent. of the natives of a state are living outside the state. Texans are beaten at this stay-at-home game only by Louisiana, Florida, and California, whose "native sons" have departed from their birthplaces to the extent of 13 per cent., 12 per cent., and 10 per cent. respectively. Poor Nevada has lost 52 per cent. of her children, and sits, a sort of weeping Niobe, among her stones.

About 51 per cent. of the total native population of Texas are white. About 15 per cent. of the total population are white Americans who are natives of other states. To this group Tennessee has contributed 127,000; Alabama, 110,000; Arkansas, 78,000; Mississippi, 77,000; Georgia, 63,000; Missouri, 57,000; Kentucky, 47,000; Louisiana, 42,000; Illinois, 34,000, and Oklahoma, 28,000.

In recent years immigration from the other Southern states has decreased, while that from the Northern states has increased. Texas is being invaded on one side by Mexicans, on the other by Yankees. It is easy for all sorts of people to discover that Texas is a good place to live.

As has already been said, it is impossible to determine with any accuracy the various foreign components of our complex population. If, as an approximation, we add together the number of foreign-born, the number of those both of whose parents are foreign-born, and the number of those one of whose parents is foreign-born, we find that about 5 per cent. of the total population is Mexican, 5 per cent. is German, and 5 per cent. is divided among all the other foreign nationalities. Since Mexicans and Germans have

been coming to Texas for a long time, the percentages they bear to the total population are, of course, somewhat larger than those just given. For example, many present-day Texans are the grandchildren of Germans. Certainly three million or more Texans are of purely European descent.

Counting Mexicans and Europeans together, we get, therefore, almost a sixth of the total population. Two-thirds of this foreign element are rural, one-third is urban; in numbers about 400,000 and 200,000 respectively. One-fifth of the total urban population and one-eighth of the total rural population is composed of this foreign element. In the whole United States half of the total urban and one-fifth of the total rural population is composed of foreigners. Both in town and country, therefore, Texas is much more American than the United States as a whole.

As is to be expected, there is a marked tendency on the part of the foreign element to cluster in certain districts. The Mexicans are naturally to be found mostly along the northern side of the Rio Grande. From San Antonio and El Paso southward and eastward Mexicans are to be found in considerable numbers and are spreading. The German population, which began coming in the late "Forties," is mainly established between Austin and San Antonio and southeastward of these cities nearly to the Gulf. Of course there are many Germans in all the cities. The number of persons born in Germany and living in Texas is decreasing. The Austrian population (chiefly Bohemian) is mainly located in two settlement areas, the one composed of Lavaca and Fayette counties, the other of Williamson, Bell, and McLennan. The Bohemians are largely rural.

The Italians are pretty widely scattered, mainly in the cities, with rural settlements of about 1,600 in Brazos and about 900 in Erath County. The Swedes are largely rural and are clustered in Travis and Williamson counties, where there are more than 4,000, and in Wharton County, where there are several hundred. There are also several hundred in each of Galveston, Harris, and Tarrant counties.

There is a Norwegian colony in Bosque County. There are small colonies of various other nationalities scattered here and there. In each of the larger cities there are about four hundred French and one hundred Greeks. The latter are rapidly monopolizing the restaurant business. Of the 700 Indians, 200 are in Polk County, 200 in Kinney County, and the remaining 300 are widely scattered. Nearly half of the 600 Chinese are in El Paso, and the remainder are scattered mainly in the cities. Most of the 340 Japanese are in the coast country raising rice.

Something in the way of a white man's hope is to be found in Texas, where the percentage of negroes in the total population has decreased steadily from 25 per cent. in 1850 to 17 per cent. in 1915, although, through interstate migration, Texas gains about 2,000 negroes a year. The percentage of negroes in Texas is about the same as that of Tennessee, Maryland, and Delaware. Only to a small extent do the negroes prefer the town to the country, the rural and urban percentages being nearly the same. In the matter of moving to town the difference between the races is the same as between tweedledum and tweedledee. Practically all of the negroes are in the eastern third of the state, and the highest percentages of negroes in the population are strikingly con-

Texas and the other Gulf States, the main channels of trade running to St. Louis, Kansas City, and to the northeast rather than to New Orleans; nevertheless, so many Texans have come out of the South, including Missouri and Kentucky and Tennessee, that Texas is predominantly Southern in thought and feeling. She always "rolls up" a tremendous Democratic majority, the Democratic primaries are the real elections, and all the political issues that lead to active contests arise between different portions of the overwhelmingly preponderant Democracy. Prohibition has been the great dividing wedge, but numerous smaller rifts are to be discovered in the Democratic lute, from which, as a consequence, clear notes do not always issue. In spite of being Southern, Texas is quite different from the Southeastern States, due to a very large infusion of Westerners, of Germans, and of Mexicans. There is a decidedly Western and cosmopolitan "feel." Nevertheless, a good deal of provincialism exists. Owing to lack of population to the south and west and northwest of Texas, and to the relative lack of intercourse with Louisiana and Arkansas, there is pretty close contact only with Oklahoma, which, after a fashion, is a part of Texas. Consequently Texas is somewhat off to herself, and this fact, coupled with her great area, causes the newspapers and public discussions in Texas to direct themselves more exclusively to the affairs of their own state than seems to be the case in the other states. In fact, Texans are prone to regard themselves as more different from the rest of the people of the United States than is really the case. "The only difference between Texans and other people," says a cosmopolitan newcomer,

"is that they think themselves different." Perhaps even in this respect there is no difference. Texans certainly possess some individuality, but no one as yet has successfully defined the Texas type, dividing it from the Southern on one side and the Western on the other. Until this is done we must regard the Texan as a chip of the old block. Speaking boastfully, and perhaps not untruthfully, we may ascribe to him the hospitality and the chivalry of the Southerner, the independence and the enterprise of the Westerner, and most of the other good qualities of each element in his complex ancestry. A highly favorable composite picture may be obtained in this way, but here and there exact truth will demand some retouching. Some of his food and nearly all of his clothes, his machinery, his games, his books, his magazines, and his new ideas he imports. Consequently he is very like other Americans. He is somewhat different from the New Englander and the New Yorker and a few others, but that is because they dwell on the periphery of the real United States and not between the Alleghenies and the Rockies, where, as President James of the University of Illinois says, the real and the major portion of the English language is going to be spoken in the twenty-first century. The Texan doesn't use the broad *a* nor refer to a girl as a "gyurl" nor a spoon as a "spun." He is primarily Southern, secondarily Middle North American, and it takes a very careful observer to pick a Texan out of a group of miscellaneous Americans. Of course, if your Texan is talking about Texas, the most inexpert ethnologist in the world can spot him at once.

PART III—THE COUNTRY

"I am the plains, barren since Time began,
Yet do I dream of motherhood, when man
One day at last shall look upon my charms
And give me towns like children for my arms."

CHAPTER I

THE LAND

“Just to think about old Texas
Makes a fellow proud, gee whiz!
How could anybody blame us
When you know how big she is?”

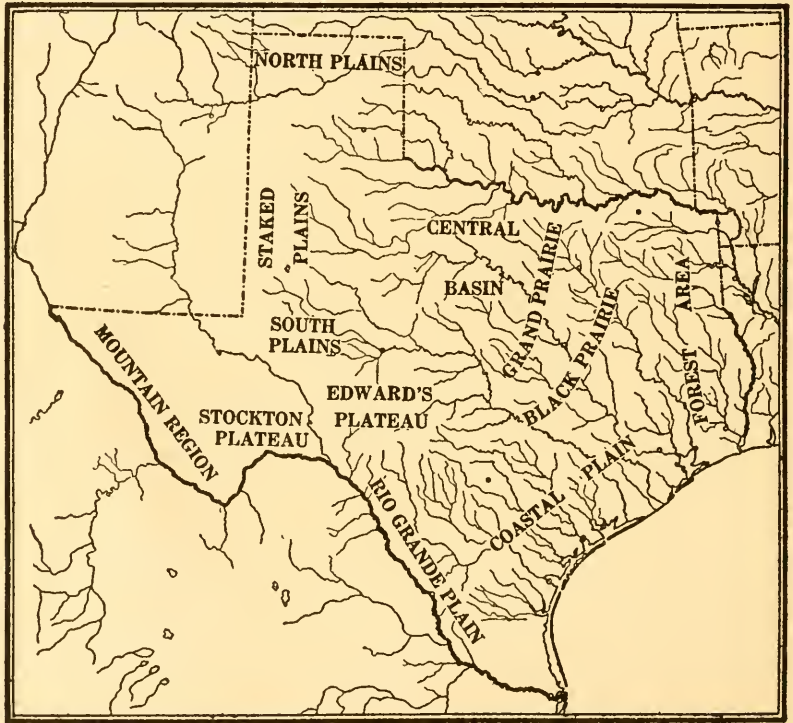
—*Jennie Lee Blanton.*

THE 265,000 square miles of land in the political entity known as Texas do not form a natural unit on the surface of the earth. The state is too large to fall within a single natural geographic unit, and the various surfaces, soils, climates, plants, and animals which characterize the different portions of Texas often extend far beyond her borders into Old Mexico, Louisiana, Arkansas, Oklahoma, and New Mexico. Man, not Nature, has put Texas on the map.

The general surface slopes from the Gulf of Mexico upward toward the northwest. Very flat along the coast—“Big Hill,” for example, near Beaumont, is only twenty feet high—with only minor inequalities anywhere, the southeastern third of Texas rises along its northwestern edge to 500 or 600 feet. This third, specifically called the Gulf Slope, divides itself naturally into the Rio Grande Plain, the Coastal Plain, the Forested Area, and the Black Prairie. The southern part of its northwestern edge is marked by the Balcones Scarp, the northern part by the White Rock Scarp.

Northwest of these scarps or “step-ups” in the general sur-

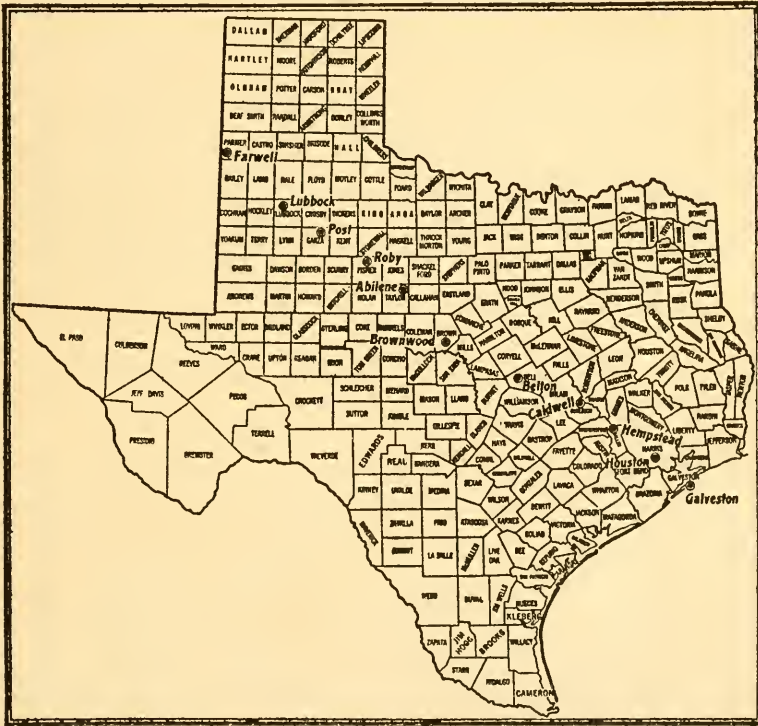
face lies the middle third of Texas, which is diversified by many hills and rises to 2,000 feet along its northwestern edge. The southern part of this middle third is occupied by the Edwards Plateau, and the northern part by the Grand Prairie and Central Basin. This Central Basin, so called because there is a slight descent to it from the Grand Prairie



on the east and also from the Staked Plains on the west, is divided into north and south portions by the Callahan Divide, and into east and west portions by the Coal Measures and the Red Beds. (See the geological map on page 71) The northwestern edge of this whole middle third is marked toward the north by the Staked Plains, or Llano Estacado

Scarp, commonly known as the "Breaks of the Plains," and toward the south by the Pecos Valley.

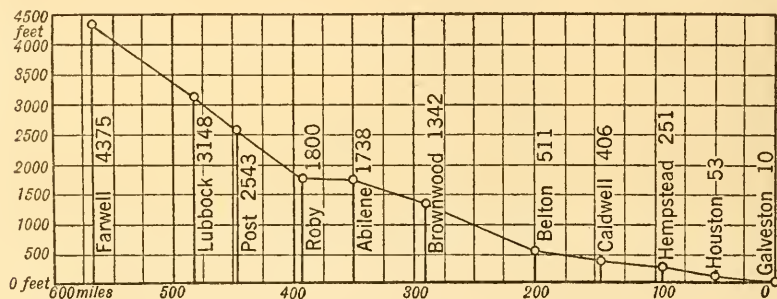
The northwestern third of the state rises to 4,000 feet along the New Mexico line and divides itself northeast of the Pecos River into the North Plains, or "Panhandle," and Llano Estacado, or Staked Plains, and the South Plains; south-



west of the Pecos it divides itself into the Stockton Plateau and Mountain Region.

All Texas, therefore, slopes upward in a northwesterly direction toward the New Mexico and the Colorado Rockies. A great deal of Texas is very flat or gently rolling country. Hills are to be found in parts of the middle third, sometimes

thickly enough scattered to form considerable areas of rough country. The only real mountains in Texas are in the west and are only lower parts of the Rockies. "In the Trans-Pecos there are 78 peaks above 5,000 feet in elevation, 35 peaks above 6,000 feet, 10 peaks above 7,000 feet." El Capitan (8,690 feet), in the Guadalupe Mountains, and Baldy Peak (8,382 feet), in Jeff Davis County, are the only



peaks above 8,000 feet. Fort Davis, at 4,927 feet, looks down upon all the other towns. Eighteen west Texas mountains overtop any to be found east of the Mississippi, but are dwarfed by the main ranges to the north and west outside the state. The average elevation of Texas is 1,700 feet, 45 per cent. of the area being below 1,000 feet.

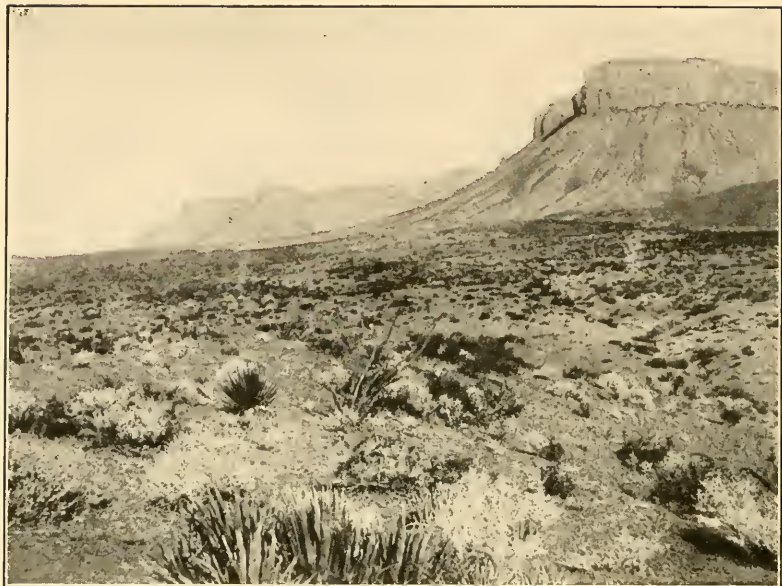
As a consequence of this rise toward the northwest, the main flow of the rivers is southeastward. With the exception of the Canadian and Red rivers, whose waters reach the sea by way of the Mississippi, all the main rivers empty directly into the Gulf. The Canadian and the Rio Grande, with its chief tributary, the Pecos, head in New Mexico; the Brazos and Colorado and Red rivers head in Texas near its western boundary. The other rivers are confined mainly to the Coastal Plain. The Brazos drains



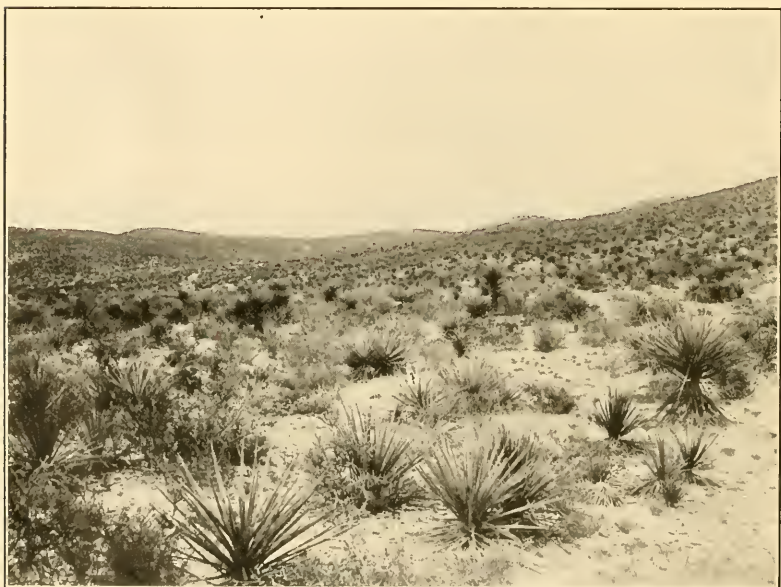
GRANITE MOUNTAIN NEAR MARBLE FALLS WHERE THE QUARRY OF THE DARRAGH BROTHERS IS MERELY A SCRATCH ON A SOLID ROCK THAT COVERS MANY ACRES AND PROBABLY EXTENDS MILES DOWNWARD. THE STATE CAPITOL AND THE GALVESTON SEA WALL WERE BUILT WITH ROCK FROM THIS INEXHAUSTIBLE QUARRY OF PINK GRANITE. GRAY GRANITES ABOUND NEARBY



Courtesy of the Bureau of Economic Geology, University of Texas
SOUTHERN END OF ELEPHANT HEAD, BREWSTER COUNTY. ELEVATION 6,200 FEET

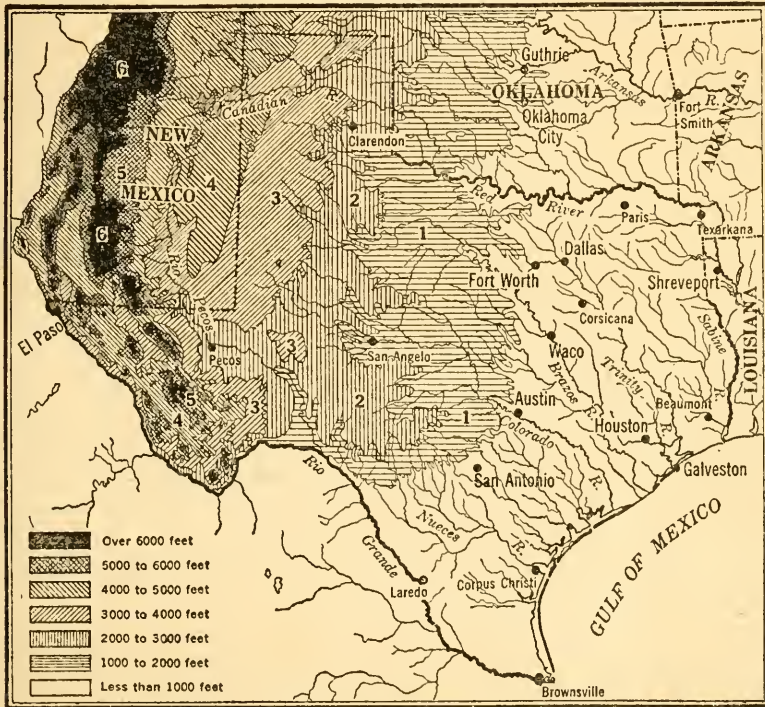


Courtesy of the Bureau of Economic Geology
 SOUTHEAST END OF THE DIABLO MOUNTAINS, EL PASO COUNTY



Photograph Taken Near Langtry by W. L. Bray
 SOTOL OR BEAR GRASS, AN ABUNDANT DESERT PLANT OF THE AGAVE AREA

nearly a fourth of the state, the Colorado a sixth, the Red a tenth, and the Rio Grande a twelfth. The eastern edges of the regions bounded by the scarps already mentioned are deeply cut into by the headwaters of the rivers. Those mentioned, especially the Colorado, are "old" rivers, geo-



From R. T. Hill, Twenty-first Annual Report of U. S. Geological Survey
Contour Map of Texas

graphically speaking, the rivers of the Coastal Plain being relatively "young." Hundreds of cubic miles of middle and west Texas have, during the later geological ages, been carried southeastward by these old rivers. With the exception of the western mountains and the Balcones Scarp (caused by a relative uprising of the Edwards Plateau) the

hills of Texas are water made, are merely harder portions of the earth which have so far not been carried to lower levels by the rains. The Callahan Divide, for example, is a "land bridge" composed of remnants of strata which elsewhere to the north and south of it have entirely washed away.

All the rivers are subject to great rises that carry down immense quantities of silt which are deposited by overflows on the lowlands. The banks of the rivers are sometimes higher than the valley behind; one of the interesting features of irrigation along the lower Rio Grande is the natural flow of water away from the river through irrigation canals. Whitish rises come from the Edwards Plateau, yellow from the eastern part of the Central Basin, red (sometimes bright vermilion) from the Red Beds. Hence the name of Red River: hence various "Paint" creeks. Woe to the clothes of any one who accidentally falls into the turbid waters of a red rise, for they shall remain red despite much subsequent washing in clear waters. Natural dye is therefore a product of Texas rivers.

Since the white man came with his axe and plow and cattle, all of which have decreased the forests and destroyed or kept short the grass, the eroding power of the streams has been greatly increased. The water formerly held back by the grasses and trees now rushes down the slopes, carrying away precious soil and causing higher and muddier rises than in early days. For example, after denudation the grassing over of about 1,500 acres which formed the drainage area of a small tributary of the Brazos caused the small stream to cease overflowing its banks and to "run" after

a rain for three days in place of three hours. Fertile soil is as yet so cheap and common in Texas that very little effort is made to conserve it. But contour ploughing (at right angles to the slopes of the fields) is coming slowly into fashion and erosion-resisting vegetation is being occasionally planted. The absence of grass has caused many lateral streams which formerly were but slight depressions in the prairies to cut back from the main rivers, forming deep ravines with steep banks. Old cattle trails and roads have also eroded into deep gashes across the earth. Recently the legislature has created the office of State Forester and has appropriated \$10,000 for forest protection, management, and replacement. Though small, the beginnings of conservation are to be seen. It is only a question of time when more elaborate methods will be adopted. Kind nature, if helped only a little, will quickly restore the country to more than its pristine productiveness.

The absence of grass has stopped the prairie fires that formerly kept down the cactus and mesquite and other "brush" which are now invading many prairies formerly almost devoid of them. The occurrence of mesquite stumps where there are now no trees tells of the burnings of former forests. Whole regions must have remained free of fires long enough for large mesquites to grow; then came the fires that burned all but the roots which later furnished the only fuel to early settlers over a wide area.

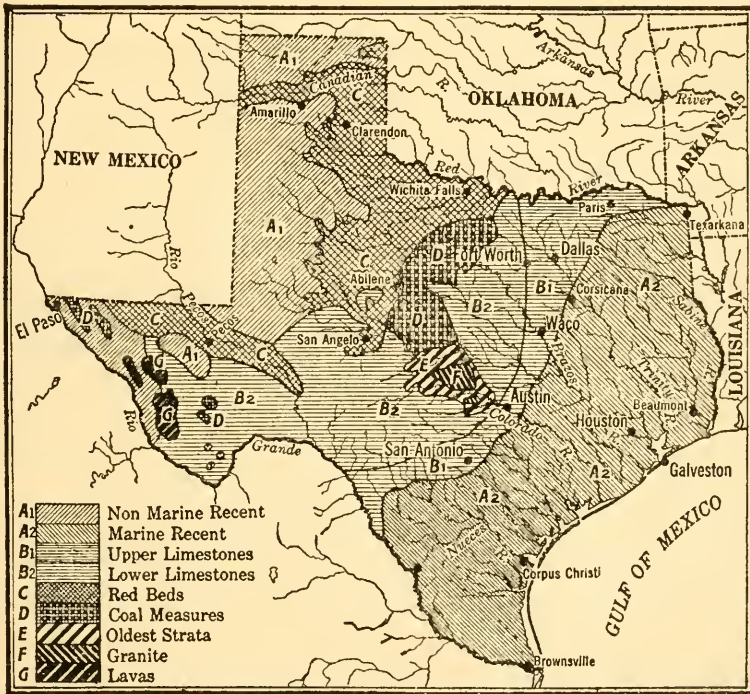
The Río Grande Plain is but a northern extension of the Tierra Caliente, or Hot Country of Mexico; the Coastal Plain and the Forested Area are the western parts of the great Atlantic Plain; the western plains of Texas are merely

the southern projection of the Great Plains which sweep across the United States into Canada. Unless the Rio Grande, the Red River, and the Sabine be so regarded, Texas has no natural boundary other than the 400 miles of coast along the Gulf. Even in this case, the Coastal Plain extends beneath the sea, which does not attain a depth of 600 feet for a hundred miles off shore. Along the coast the never-ending combat between sea and land has built up long, low-lying, sandy islands. Padre Island, the longest of its kind in the world, extends over a hundred miles parallel to the coast. These islands inclose shallow lagoons, to which, between islands, there are shallow passages from the Gulf. It is this situation that has rendered harbor improvement work so necessary and so beneficial. Had the Gulf of Mexico higher tides, the passages between islands might be kept cleaned to sufficient depths by tidal currents. A slight geologically recent subsidence of the land has formed bays which at the mouths of the rivers are rapidly filling with sediment. Old Spanish maps of the coastline indicate many extensive changes in its bays, peninsulas, and islands during the last two hundred and fifty years.

In Texas there is a particularly close relation between the rocks that underlie the surface and the hills, valleys, soils, plants, and animals that now occupy this surface. To geology, therefore, we must look for an explanation of the conditions which, along with amount of rainfall, have determined and will continue largely to determine the industries and population.

The accompanying diagrams, not drawn strictly to scale, indicate sufficiently the geological situation underground

and at the surface. Those great sheets of rock which mainly lie underground but whose outcrops form the surface of the earth are indicated by different colors and by their geological names somewhat modified for present purposes. In geology the word "recent" is to be taken in a strictly Pickwickian sense. The newer strata lie, of course, above the

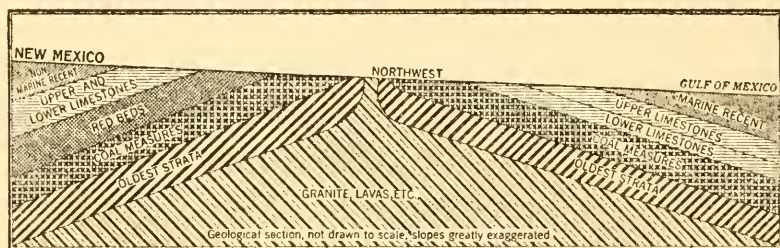


Compiled from Simond's Geography of Texas and Reports of the U. S. Geological Survey

older. Not all the rocks of any one of these systems are alike, the names being derived from some prominent character of the system. The first diagram does not apply to the Mountain Region, where the stratified rocks laid down by water have been tilted in various directions by igneous

agencies. The Western Recent is mainly a lake deposit, but all the other stratified rocks are marine. The granite long ago cooled from a molten or igneous state. Over the southeastern two-thirds of the state the strata "dip" to the southeast; over the remaining third they dip to the northwest.

In the Central Mineral Region in Llano, Burnet, and Gillespie counties a fundamental granitic upthrust has lifted up all the stratified rocks, and during the ages that



have passed since the upthrust, erosion has partly removed the uplifted and tilted strata and has eaten away some of the granite wherever the formerly overlying stratified rocks have been entirely washed away. The granite is exposed in huge domes several hundred feet high covering hundreds of acres. There is no commercial limit to the amount of it; the little that has been removed to build the State Capitol, the Galveston sea wall, and various buildings has scarcely scratched one of the smaller domes.

Derived from the wash of extensive lands composed of the Oldest Strata, and lying north and east of the Central Basin, the Coal Measures, and on top of them the Red Beds, were laid down in very ancient seas whose depths varied as the ages rolled by. Elevated subsequently into the

land and deeply eroded, tipped in various ways by the ever-palpitating earth, sunk again to deep-sea depths, these disturbed and eroded Oldest Strata, 12,000 feet at least in thickness, were covered while under the sea to the depths of a couple of thousand feet by the remains of sea animals which eventually consolidated into limestones, the Lower and Upper Limestones. On rising again from the sea, in one of those long-time waves that have marked the history of the crust of the earth, large portions of these strata have been washed away by a weathering process still going on. This process has removed much of the Upper Limestone from the Lower and all of the Limestone from those areas where the Red Beds and Coal Measures, the Oldest Strata, and the granites are now exposed to view. The material eroded from all these older strata has gone to make the Recent Beds of the Coastal Plain, which are, as yet, somewhat unconsolidated formations built under water along the slowly shifting Gulf shore. This building is still going on and, unless the Coastal Plain again subsides beneath the sea, Texas will probably continue to increase slowly, at the expense of the Gulf, her already great area for thousands of years to come.

In washing away, these various strata have weathered in ways that have given rise to various kinds of landscapes, and their wash has formed various kinds of soils. The soft clays, sands, and sandstones of the Recent Beds covering the southeastern third of Texas form, as does the Western Recent, a level or very slightly rolling country that is channelled here and there by the streams.

The rather soft clay, marls, sands, and limestones of the

Upper Limestones weather into the undulating country and "black waxy" soil of the Black Prairie. This black soil is so sticky when wet that passage over roads made of it even in a very light vehicle is practically impossible at certain stages. The mud sticks so to the tires that it is carried in sheets toward the tops of the wheels, where, falling by its weight around the spokes, there is soon a solid wheel of mud weighing hundreds of pounds. Hence arise loud cries for good roads, which cries are being slowly answered. Rock and gravel are scarce in the black waxy region and sink indefinitely into the soil when placed upon it. In severe droughts large and deep cracks form in this black soil, which is so fertile, so deep, and, when wet, so sticky.

The Upper Limestones, composed largely of fairly hard limestone alternating with clays, weather into hills with steep sides and nearly flat tops, giving rise in many places to a fairly rough type of surface. The Balcones Scarp marks a "fault," or crack, in the crust of the earth where the Lower Limestones on the west have risen in places as much as a thousand feet relatively to the Upper Limestones on the east. Owing to erosion, the present height of the scarp no longer measures the amount of this rise.

The Red Beds consist mainly of a somewhat sandy red clay, which weathers into long and extensive flats separated by scarp lines, a kind of country very much resembling a very broad and very flat flight of stairs. In places these Red Beds afford a rough, deeply cut country without rocks. In Stonewall County this type of country is to be found to perfection. Portions of the walls of the cañons falling down leave exposed white streaks of gypsum which often extend

from top to bottom of the cañons and soon weather to the prevailing red. Gypsum and salt abound in the Red Beds, producing purgative waters and that saltiness of the Upper Brazos which is appreciable far down the river. It was of Rio Grande, not of Brazos, water, however, that the poet wrote:

“For he had some water, or rather some dregs,
A regular cathartic that smelled like bad eggs.”

The Coal Measures, made up largely of soft shales and clay with some sandstones and conglomerates, have eroded into ridges of flat-topped hills surrounded by wide clay flats with soils of very variable fertility. It is the Recent Beds, the Upper Limestones, and the Red Beds that furnish the fertile soils of Texas in solid bodies of tens of thousands of acres.

To add the spice of variety to these vast, nearly uniform and almost horizontal sheets of earth laid down under the primal seas, volcanic rocks exist here and there in some abundance. First there is the up-tossed granitic Central Mineral Region, which is so interesting to geologists because of the peculiar tilting of its strata and because of its very various minerals (Llano County alone has more than 100 of the nearly 180 varieties of minerals found in Texas); second, there are some large flows of lava and other volcanic rocks in the Trans-Pecos; lastly, there are a few eroded outcrops of basalt, remnants of very ancient volcanic action, and widely but sparsely scattered over the Coastal Plain.

CHAPTER II

THE CLIMATE

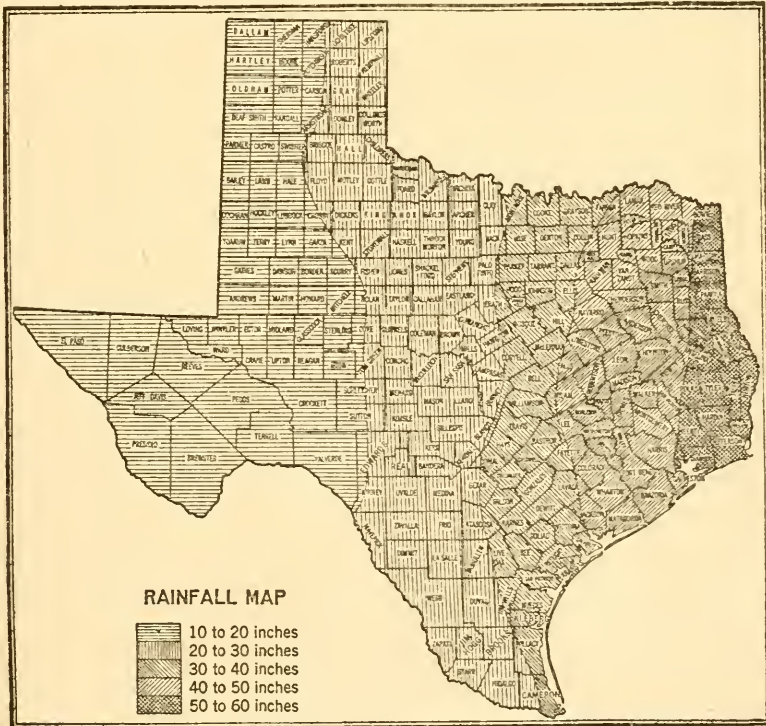
"O come, my love, and go with me
Right through the norther's cold;
What matters if the wind blow hard,
Are we not tough and bold?"

—*County Liner, pseudonym of a star route mail man.*

THE lines of equal annual rainfall run nearly north and south, the rainfall steadily diminishing from fifty-five inches on the east to ten inches at El Paso. Evaporation, on the contrary, steadily increases from forty-five inches on the east to ninety inches at the west. Obviously, humid conditions prevail to the east and arid conditions in the west. Irrespective of the prohibition issue, Texas is permanently divided into wet and dry. The region where the annual rainfall is between thirty and forty inches is sometimes affected by drought; the region where it is between twenty and thirty inches it is often so affected. Drainage is needed in the east and along the coast; irrigation is needed in the west.

Fortunately where the rainfall is deficient its distribution through the year is generally rather favorable to vegetation. Occasionally the precipitation for a whole year falls in a week or two. Winter is the driest season; spring is the wettest in the middle third of Texas; summer is the wettest over west Texas generally; fall is the wettest only along the southwestern coastline.

East of the line of forty-inch rainfall there is generally no scarcity of water, and humid conditions with luxuriant vegetation prevail. The wet springs followed by dryer summers which prevail over central Texas are particularly suited to cotton and are not unfavorable to many other crops. Early planting to avoid the dry summers is practised. Occasion-



Compiled by U. S. Weather Bureau

ally when there are general summer rains two and even three crops are raised, and prosperity rules supreme. West of the thirty-inch line of rainfall dry-weather crops must of course be depended upon, though many standard crops are grown in profusion in favorable seasons. A single crop in this

region has often paid for the land upon which it was raised. West of the twenty-inch line native grasses and dry-weather crops grow in decreasing amounts. The winter snows of the Panhandle have made that region a great wheat-producing area. Snow, however, rarely reaches to the Gulf, and in south Texas a fall of snow causes a suspension of business and much merrymaking.

The rainfall is subject to very wide variations, and "only a fool or a newcomer will try to predict the weather in Texas." At Austin, for example, the recorded annual precipitation varies from nineteen to fifty-four inches, and the variations in the monthly precipitation are of course much more extreme. Cloudbursts, wet seasons, droughts, in most of Texas, must be expected to interfere with the usual fall of the rains. The rainmaker, using various devices, has plied his vocation at various places with varying success. At times luck has favored him with a shower or even a cloudburst; at other times the clear skies calmly exposed the futility of his efforts.

The extent to which modern man, using scientific methods, will be able to conquer droughts awaits the determination of the future. Some further conquest is certain. The country of the permanent range stock business has two elastic boundaries: the desert on the one side, the farms on the other. The population flows westward after good seasons and ebbs eastward after bad, each ebb tide leaving increased numbers. Mastery of arid conditions by man grows better as time goes on. It is a favorite but unsupported theory of western "boosters" that the rainfall is increasing. It may be, but there is no record to prove it,

and changes in climate are too slow to be noticed by casual observers. That "this drought is unusual" is another theory of the dry-land boosters that is contradictory of the former. The native vegetation tells the true tale, and, as Vernon Bailey says, "Even after a season of copious rainfall in a valley clothed with cactus and scrubby mesquite trees, the experienced ranchman knows better than to plow and plant with the idea that the following season will be similar." Speaking of booms in the arid regions the very country itself combines with unscrupulous or overenthusiastic land agents to deceive the newcomer; the country actually lies about itself. At certain times, especially after good rains, so luxuriant are the grasses and flowers that one can scarcely believe drought or crop failure is possible. But all that glitters is not gold, and the pasture that one year is waving with grass may the next year have almost no verdure to hide its nakedness. The ebb of the small farmers—"nesters"—during and after droughts is watched with joyful eyes by the old cowman who is "glad to see the damn nesters leaving."

Western Texas will increase in population and the population will be prosperous, but the majority of Texans are likely to continue to live in the eastern third of the state, where rain may be expected without risk of disappointment.

The march of agriculture in a semi-arid land is full of hope and disappointment, of progress and setbacks. According to disposition or interest, one person emphasizes the progress, another the setback. The boomer maintains that all is safe with that human tide that a few years ago swept over the Panhandle and lifted the price of the land

from two dollars an acre to forty. The pessimist, usually an old timer, prophesies drought, repeated crop failures, and deserted towns. "Just as good a country as back East," is the cry of the optimist. "Farming has reached its top notch here," is the cry of the pessimist. Who is right? Partial failures occur, universal failures do not.

In general, Texas is a land of Italian color, beautiful clouds floating over violet-topped hills, "with cattle, cattle, cattle, and sage and sand and sun." Clear skies, clear air, and almost dazzling sunshine are the rule. Dr. I. M. Cline summarizes the situation as follows: "The southeastern portion of the state has 55 to 65 per cent., while the Trans-Pecos region and the Panhandle have 65 to 75 per cent. of the possible sunshine. Very few days pass in Texas without some sunshine. Along the Gulf Coast it is approximated that the sun shines to some extent 320 days out of a year, and the number of days with some sunshine is greater than this over other portions of the state." In spite of the truth of this, no Texas hotel man has yet followed the example of that boniface of Yuma, Arizona, who offers free board on every cloudy day.

Fortunately it is not correct to apply to Texas the words used by a cowboy in speaking of a certain Western state, "She's a drop of water in the hot sunshine on a big rock in a pile of sand." The eastern third of Texas is abundantly supplied with good underground and surface waters, except near the coast, where the underground waters are salty, and over the Rio Grande Plain, where they are often alkaline and unsuited for drinking or irrigation. Artesian water is also abundant, particularly in the region of the

Upper Limestone, coming in fine quality from the Trinity Sands, a stratum near the bottom of the Lower Limestone. The uplift of the Lower Limestone to the west has caused, at the foot of the Balcones Scarp, a series of artesian springs which are among the largest in the world, so large as actually to furnish water-power. Wells and a few springs are to be found to the westward of the Upper Limestone, but increasing reliance must be put upon the storing of storm water in artificial reservoirs, fine specimens of which are to be found at Wichita Falls, Stamford, and Sweetwater. Artesian wells are rare and the water of deep wells is highly mineralized. Over the middle third of Texas the storing of all the storm water that now runs off, carrying good soil with it, is a conquest of nature that is certain to come about. Nor will this storing affect the navigability of the rivers of this region, for they are not navigable now and never will be. "Pork barrel" money has been spent to a very great advantage in dredging Texas harbors and may be spent to advantage on the lower portions of the coastal rivers. Elsewhere it is better to build post-offices with it. Still, George Fitch was rather hard on the Texas rivers when he said they had to be watered in the summer to keep them from getting dusty. In dry countries water is far more useful for irrigation than for navigation or for power, and any use of it in the last two ways should be subservient to its use in the first. "All that hell needs is fine water and good society" is a favorite saying in the thinly settled dry country. Here and there dams along the streams are sources of water-power. The Austin dam across the Colorado, built in 1893, washed away in 1900, and recently rebuilt, is the

most conspicuous example. Water-power in Texas is scanty, because where there is plenty of water the country is too flat to make a fall, and where there is plenty of fall there is no water. A west Texas man at Beaumont, during a heavy rain reported that the country was so flat the rain accumulated to such an extent that he was forced to leave his hotel from a second-story window by means of a boat. The second-story was an exaggeration; perhaps even the boat was merely a wooden sidewalk afloat. In the coast towns it is not unusual to see carriages sunk in mudholes in unpaved streets waiting patiently for dry weather when their owners can dig them out and put them going again.

On the Plains and elsewhere there is enough water for some irrigation from wells of moderate depth, the water being pumped by thousands of windmills moved by the unfailing winds. Enthusiastic local wiseacres maintain that underground water exists in almost unlimited amounts, but, when pressed for reasons, they resort to explanations that are mysterious and unsatisfactory. The water is really local rainwater which has percolated downward, but the wiseacres suppose it to have come down from the Rocky Mountains or up from the Great Lakes, or sideways from some other equally unlikely source. As yet we know only roughly how much of the rainfall evaporates, how much runs off down the rivers, how much sinks into the ground. Plowing increases the sinkage, removal of vegetation decreases it. It is plain, however, that there is not enough water underground to irrigate more than a small part of the total surface. Only the future can tell us the irrigation possibilities of the West, which are probably great in amount



Courtesy of Farm and Ranch
A TYPICAL BARB WIRE AND MESQUITE POST FENCE



GRAND FALLS IN WINTER. CAMPELL AND HARDING RANCH, PALO DURO CAÑON



Courtesy of the Dallas News

THE TRINITY RIVER AT LOCK AND DAM NO. 1 ABOUT EIGHTEEN MILES BELOW DALLAS WHICH IS AFTER DEEP WATER VIA THE TRINITY AND CONGRESS



Courtesy of the Dallas News

A VIEW OF THE TRINITY RIVER NEAR DALLAS AT FLOOD TIME. A TEXAS AND PACIFIC TRESTLE HAS BEEN WASHED DOWN

of products but small in acreage compared with the total area.

As a matter of fact, the story of the underground waters in many places is going to be the story of free grass over again. In free grass days, a bunch of cattle could be driven into a country already occupied by all the cattle it could carry, and the result was starvation. Nowadays a well may be drilled where other wells are already using all the available water, and the result is a lowering of the artesian pressure, or of the water level, as the case may be. The law in regard to riparian rights is sufficiently confused, but the law governing the sinking of wells has yet to be made. You can take all of a man's underground water away from him if you go deep enough to tap his supply. Underground oil is like underground water, and to prevent the other fellow from getting all of it the derricks of wells are crowded into the petroleum fields until their foundations sometimes touch. Neither conservation nor economical production is possible under such unrestricted competition.

The mean annual temperature ranges from 55° in the Panhandle to 72° in the extreme south. Everywhere spring and fall are delightful, while the winters of the southern half and the summers of the western third leave little to be desired. Except in this third the mean summer temperature is about 81° , with infrequent and delightful drops to 60° and numerous and painful rises to 100° and over.

"The heat in the summer is a 110,
Too hot for the devil and too hot for men."

When it gets above 95° , however, it is counted "pretty hot" and cooler weather soon relieves the situation. In

1908, at the same hour, the thermometer stood 16° below at Texline, and 84° above at Brownsville. The monthly mean temperatures at Amarillo and Brownsville differ to an extent that reveals the size of Texas. In January the difference is 24° , in February 25° , in March 23° , in April 18° , in May 14° , in June 9° , in July 8° , in August 9° , in September 11° , in October 18° , in November 20° , in December 23° . Nearly always the nights are cool and invigorating. The soft, steady Gulf breezes of the summer and the frequent clear and warm sunshiny days of the winter are the two great charms of the Texas climate. The summer breezes make perfect nights, the winter sunshine makes perfect days. In making fair comparisons with eastern temperatures, on account of the great evaporation, some 10° or 15° must be subtracted from the Texas summer records. The human and the mercury thermometers fortunately do not register exactly alike. Sunstroke is practically unknown.

The average winter temperatures range from 35° in the Panhandle, with a minimum of 16° below, to 60° in the extreme south, with a low record of 12° above. April 15th and November 1st are the average last and first frost dates for the Panhandle. March 15th and November 18th are the dates for central Texas. These dates vary at least three weeks in different years. The number of freezing days ranges from more than one hundred in the north to three or two or none on the south coast. The lines of equal rainfall run north and south, the isotherms run nearly east and west; as a result Texas is cut into a checkerboard whose squares have slightly different climates

and crops. The following advice, however, is generally applicable:

“But stay at home in Texas where the work lasts the year around,
And you never catch consumption by sleeping on the ground.”

The heat of the summer is further greatly modified by the Atlantic trade winds, which blow fairly constantly throughout the summer and intermittently throughout the winter, in which season they are much interrupted by “northers,” or cold waves, that blow across the state and into Mexico with diminished violence toward the south. Many northers die out before reaching the Gulf, but some extend into Mexico as far as Vera Cruz. In the Panhandle,

“Where the hot wind blows right after it snows
And the prairie dog kneels on the backs of his heels
And fervently prayeth for rain,”

northers are often too severe to be welcome, but over the southern half of the state they form a pleasant feature of the climate and are gratifying to the farmers because they are supposed to (and probably do) kill the larva of many insects. Mild northers occur even in the summer and are then generally preceded by sultry calms, much lightning, and some rain. Northers are both “wet” and “dry,” with the latter preponderating. Texas winters consist largely of a recurring cycle of southeast wind, intermediate warm calm, sudden norther slowly dying away, and then southeast wind again. The drop in temperature at the beginning of a norther is very sudden, amounting sometimes to 40° or 50° in an hour or so, but the return to normal temperature is much slower. So sudden is the drop that a

standard, and not very untruthful, story tells about a too inquisitive fish that, desiring to see if the long, low cloud-bank to the north meant a "blue" norther, leaped out of the water only to fall back on the ice, an unintentional case of burning one's bridge behind one. Bob Taylor of Tennessee, among his Texas stories, describes how an ox driver was prevented, by the freezing of their carcasses, from skinning two oxen that had just died of heat while he was slowly driving them yoked to an empty wagon.

So constantly do the winds blow in the western half that windmills are an absolutely reliable source of power. When the newcomer asks the oldest inhabitant "if the wind blows this way all the time," he gets for his answer, "It blows the other way a part of the time." Cyclones sometimes occur, but rarely, and after the appearance of one in a region there is a tremendous and prairie-dog-like activity in the construction of semi-subterranean "storm cellars," which are so inviting to centipedes and snakes that they are usually found in them when the proper owners seek refuge from a storm. Tropical storms of great violence sometimes, but rarely, wander to the Texas coast, and at long intervals do great damage. In 1875 the little town of Indianola, at the west end of Matagorda Bay, was entirely swept away, with the loss of nearly two hundred lives. The great storm of 1900, which swept the sea over the island and the city of Galveston, drowned several thousand people and destroyed an immense amount of property. The storm of 1915 caused the loss of several hundred lives and a great deal of property along the coast.

As a home of the white race Texas is so healthful that she



INDIAN BLANKETS ON THE CAMPUS OF THE A. & M. COLLEGE OF TEXAS

A PHOTOGRAPH OF WILD DEER MADE IN SOUTHWEST TEXAS

RAIN LILIES ON UNIVERSITY OF TEXAS CAMPUS, AUSTIN



THE GREEN JUICY LEAVES (REALLY THE STEMS) OF THE CACTUS BEAR LARGE, PROTECTIVE, NEEDLELIKE SPINES AND CLUSTERS OF SHORT, RED, EASILY DETACHED STICKERS

SELECTIVE BREEDING HAS GIVEN RISE TO A SPINELESS AND STICKERLESS CULTIVATED CACTUS

A MEXICAN SINGING THE SPINES AND STICKERS FROM THE GROWING WILD CACTUS WITH A GASOLINE TORCH. ONE MAN CAN PROVIDE FORAGE FOR A HUNDRED CATTLE. WHEN VERY HUNGRY CATTLE SOMETIMES EAT THE CACTUS BEFORE IT IS SINGED

has not yet found it necessary to keep any very accurate account of births or deaths. On the other hand, it is a slight exaggeration to claim, as many localities do, that their healthfulness is so great that people have to move away to die. The death rate is so small that a considerable number of patriotic Texans, ashamed of its smallness, endeavor to increase it by engaging in mortal combat with others equally patriotic and pugnacious. Perhaps this is one of the reasons that the percentage of people over 65 is only half what it is in non-belligerent Massachusetts! The general experiences of various communities, and the incomplete vital statistics kept, show Texas to have a very health-giving climate. People frequently live to great ages, and sickness in summer is less frequent than in winter. There is no disease which the climate seems to encourage to any unusual extent, and all west Texas is correctly regarded as a health resort. In the humid portions malaria, of course, occurs, but not to any alarming extent. Even in the wettest portions of east Texas, wherever the smallest and most elementary sanitary precautions have been taken, the school children are as healthy looking as they are anywhere. The bracing northers of the winters and the great evaporation of the summers combine to make Texas very healthful all the year around. The Texas sun is a powerful germicide, and the general health is remarkably good, although sanitation is as yet in its infancy. When Texas people coöperate properly with the Texas sun, the state will stand comparison with the most healthful country in the world. Most of the typhoid that occurs is easily preventable, yellow fever has not been seen for many

years, dengue has been rare, malignant smallpox is nearly unknown, even among the most ignorant Mexicans. Some hookworms are to be found in east Texas; the deadly anopheles mosquito is rare but not unknown. Considering the general indifference to sanitation and the lack of stringent means to prevent the spread of contagious and infectious diseases, the death rate seems to be fairly low. Fortunately indifference is rapidly changing to vigilance.

The long summers may be enervating; they are certainly not unhealthful. For work, the dry summer is better than the damp spring, but one can work all the year round without injury. A shortening of the summers would improve them. Many persons, who have grown hale and hearty living through many Texas summers, acquiring five thousand a year, find it desirable to spend a month or two of the summer in cooler climes. When they have ten thousand a year they find it necessary! Climatology and finance are pretty closely related.

CHAPTER III

THE WILD LIFE

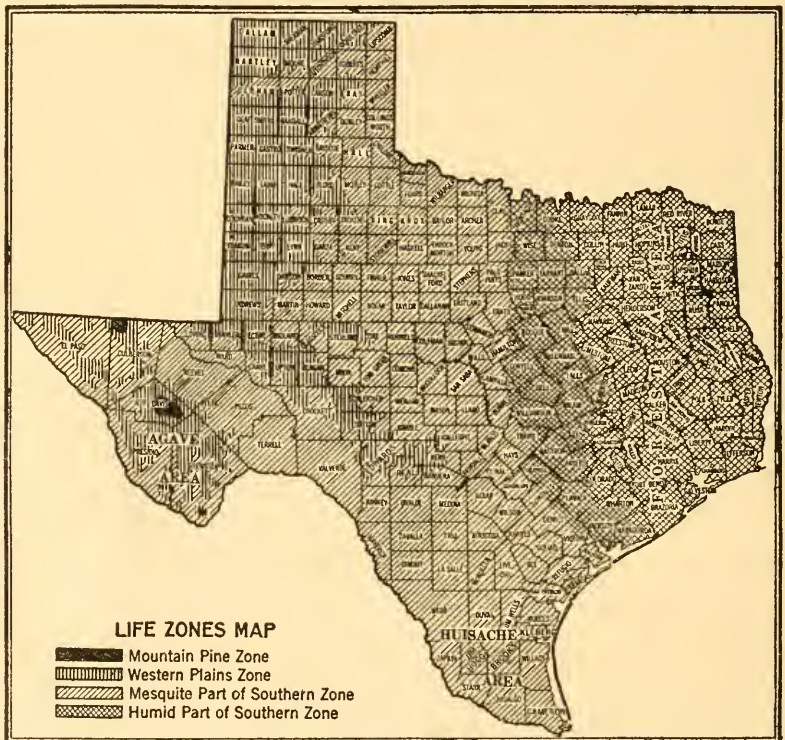
"And the little gray hawk hangs aloft in the air,
And the sly coyote trots here and there,
And the black snake glides and glitters and slides
Into a rift in the cottonwood tree."

—"Lasca."

THE distribution of plants and animals in Texas has been much more affected by the amount of rainfall than by latitude. The areas of distribution of plants and animals are therefore often strips of country running north and south. The larger life zones of Texas are shown on the accompanying map. Rainfall has located the eastern edge of the Mesquite Zone, but the height above the sea and latitude have located the western and northern edges. Temperature has fixed the northern boundary of the Huisache Area. Rain, or the lack of it, has fixed the Forest Area and the Mesquite Zone. Northerners have had a tremendous effect in preventing the occurrence of wild tropical plants and animals and the cultivation of semi-tropical fruits such as the orange and the banana. Cheap protection from occasional freezes is the great desideratum of the citrus fruit industry. Smudge fires have been used advantageously, but high winds sometimes render them ineffective. Whether northerners or men will win in this citrus fruit contest is as yet somewhat undecided.

The life zones shown on the map are "based on the oc-

currence of native plants and animals and form a sure and inexpensive guide to selecting the kinds of crops most suitable to a given locality." The United States Department of Agriculture has mapped these life zones with great care in the belief that in so doing much wasteful and unwise and expensive agricultural experimentation would be prevented.



From Bulletin No. 25 N. A. Fauna, U. S. Department of Agriculture

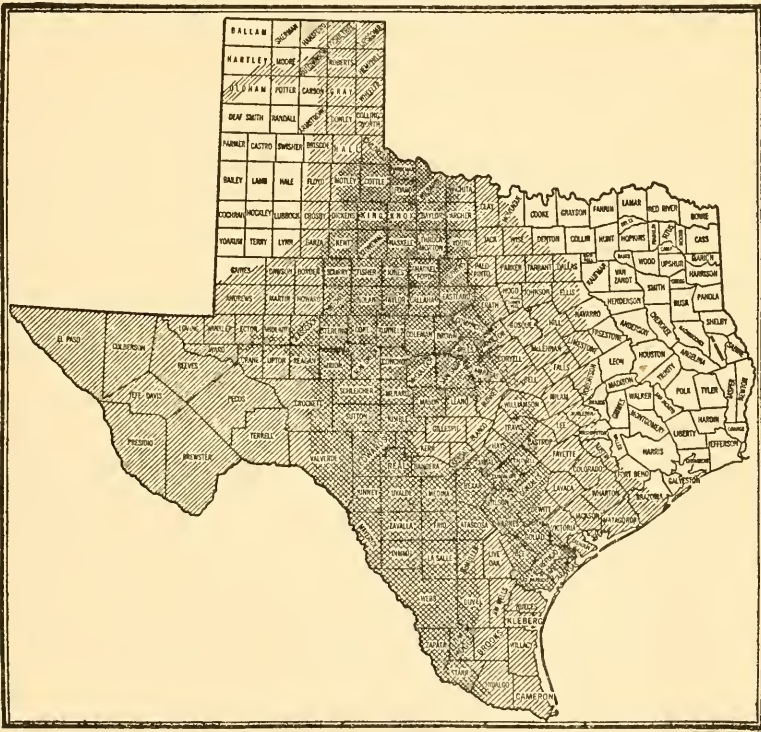
"The division of the state into wheat, cotton, and stock-raising districts is no matter of accident, nor is it a matter of choice on the part of those engaged in the various industries—the normal conditions limiting life zones cannot be materially overcome, nor can they be safely ignored."

In the Forest Area of the Humid Zone there is an abundant growth of cypress, tupelo, palmetto, and hickory in the swamps; of hickory, magnolia, sweet and sour gum, oak, sycamore, willow, and holly in the river bottoms; of loblolly pine, short-leaf pine, long-leaf pine, post oak, dogwood, sassafras, and other trees too numerous to mention on the uplands. The long-leaf pine of Texas and Louisiana is said to form the finest body of standing timber left in America. Spanish moss and numerous vines cling to the trees, while cotton, corn, fruits, and vegetables are grown in luxuriant abundance. In east Texas there is still that abundance of good things to eat which seems to have marked the days before the war as well as the days before high prices. It is so easy to make a living there that this very ease is an impediment to the progress of the people. Nature hands them too much. The Black and Grand prairies in the Humid Zone are nearly free of trees except along the streams, and their generally black soil differentiates their vegetation somewhat from the more sandy land to the east. The Humid Zone covers only one-third of Texas but is the home of three-fourths of the people.

The Mesquite Zone is in rather marked contrast to the Humid. It has elms, pecans, cottonwoods, and willows along the streams, with oaks, cedars, and hackberries on the hills. Much of the timber is stunted, and when it occurs in thick patches is called chaparral or shinnery. The timber occurs scattered and in groups of various sizes, small patches of oaks or hackberries being called mottes. There is much land nearly or entirely free of timber, and such prairie areas in their natural state are covered with various nutritious

grasses, and in season with billions of wild flowers in great variety. The mesquite tree, with its heavy and durable wood, feathery leaves, and nourishing beans, marks the whole zone. In places it forms dense thickets, but it is often sparsely scattered, when, at a distance, a mesquite valley looks something like a peach orchard. The mesquite rarely reaches thirty feet, grows straight enough to make fence posts only, and gives a useful shade which does not prevent the grass from growing under it. "Its spread, during the past fifty years, has been a marked phenomenon: it has passed the Brazos. It has pushed northward over the Staked Plains, covering half their area. Miles of the level prairie in the Abilene country are covered by mesquite. San Antonio is half surrounded. The coming of the mesquite has brought a vast deal of wood and much forage, but the agricultural areas do not need these at the price, and the more arid areas would be better off in the long run in open grass pastures." Cacti of many kinds are found in the Mesquite Zone, the commonest and most conspicuous being the prickly pear, which bears a not unpleasant fruit and thick, juicy leaves that, divested of their large thorns and numerous small stickers, are an excellent food for cattle when properly mixed with other materials. The numerous grasses of this zone have formed the basis of the great range cattle industry, though the plow of the farmer and over-grazing have greatly reduced them from the palmy early days. A little care will bring them back again except in the plowed fields; and it is certain that many cattle will continue to be raised in this zone which was once the winter home of incredible numbers of buffaloes.

The Huisache Area of the Mesquite Zone, with its palm, huisache, bananas, and oranges, has a semi-tropical flavor. The Agave Area on the southwest represents the invasion of the desert which bears the agave, the creosote or greasewood bush, screw beans, ocotillo, sotol, and bee bushes. The



From Bulletin No. 47, Bureau of Forestry, U. S. Department of Agriculture.
Distribution of Mesquite

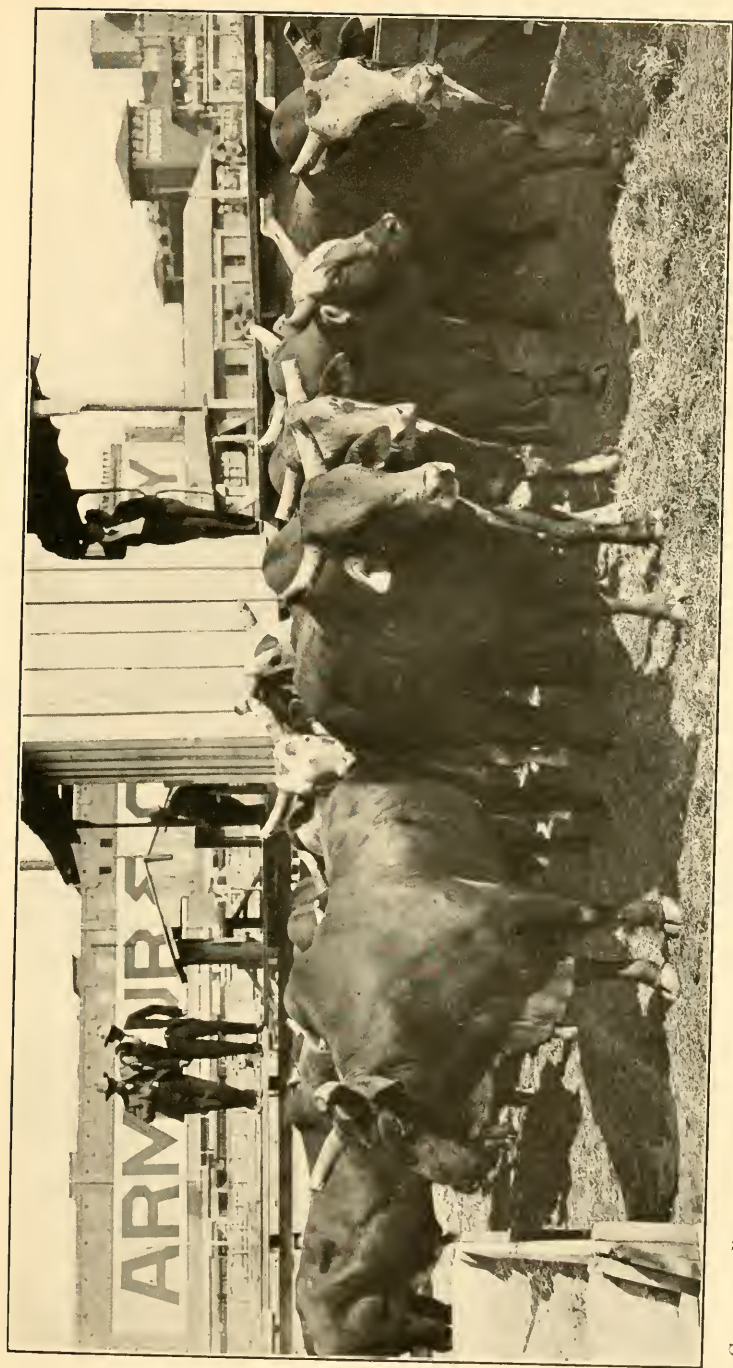
guayule furnishes some rubber, the agave furnishes fine fibres, screw beans are good cattle food. A single rain covers the good soil of the valleys with flowers that mature without any other water.

The Western Plains Zone, whose vegetation consists

chiefly of grasses, on steep slopes has also pines, junipers, mimosas, and yuccas. Over most of the real plains trees and even bushes are so entirely absent that a little girl from Hereford on leaving there for the first time wrote home: "Dear Papa, you just ought to see the trees growing wild here in Austin." Hundreds of "tumble weeds," which grow in globular form and are broken off at the ground in the fall, in high winds roll rapidly across the plains in a seemingly joyful race. The weeds are often stopped by barb-wire fences, along which, as a nucleus, the weeds pile many feet high. Here grow also several kinds of the famous "loco" weed, so called because cattle and horses who eat this weed stagger about and behave somewhat curiously, loco meaning crazy in Spanish. Horses get "locoed" oftener than cattle, usually from eating the weed in early spring, before the green grass has come. Loco is not such a menace when pastures afford sufficient grass.

On the tops of the western mountains the vegetation is that of the mountains of New Mexico and Colorado, where grow the yellow pine and even the wild potato. But the Mountain Pine Zone is of small area and relatively unimportant. On the tops of the highest mountains a few Canadian plants are to be found, outlying islands of very northern vegetation. Similarly the tops of the highest hills of the Edwards Plateau are covered with outlying islands of plants of the Western Plains Zone.

Something must be said about the native flowers which abound in masses of many acres and in a variety that defies special listing. The yuccas and cacti speckle the desert with bright colors, the blue bonnet and various "weeds"



CATTALOS, CALLED ANG'S HALF BREDS FROM BUFFALO COWS. COL. CHARLES GOODRIGHT IS RAISING BOTH CATTALOS AND BUFFALOES IN SMALL NUMBERS ON HIS PANHANDLE RANCHES

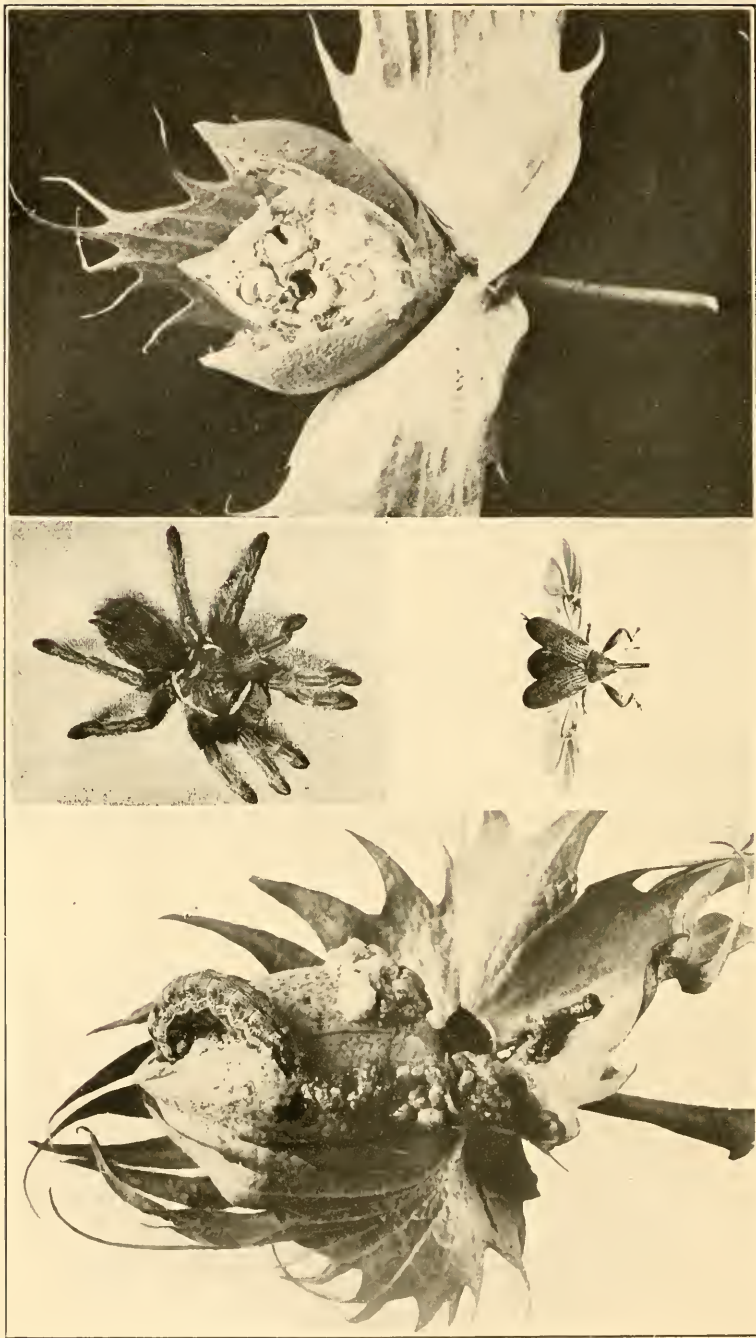


Photo of tarantula by courtesy of Prof. Petrankovich, Yale University

THREE TEXAS INSECTS WITH BAD REPUTATIONS

Others by courtesy of the U. S. Department of Agriculture

Left, the cotton boll worm at work, centre, top, a tarantula; centre, bottom, a mature cotton-boll weevil (*Anthrenus grandis*); right, grubs or larvae of the boll weevil—cotton's worst enemy—at work

cover hundreds of acres of prairie with blue and yellow and red and riots of various colors. The primroses made famous by De Vries, the phloxes of many colors, euphorbias, salvias, Texas plumes, Texas fire wheels, asters, rain lilies, orange cosmos, coreopses, and paint cups are widely and abundantly scattered. The hyacinth, the parrot feather, the calladium, and the algæ grow in the lasting streams and ponds not much subject to overflow, sometimes blocking them with luxuriance. Among vines there are the clematis and convolvulus, the smilax and the passion flower, ipomea and grapes, poison oak and ivy. Natural flower gardens and parks are to be found offset by uncovered, sun-beaten slopes that have also their charm to one who has learned to know them. Mistletoe is so abundant as to be something of a pest. In south Texas the long gray Spanish moss hangs in dense and beautiful clusters from many trees, especially from live oaks in the bottoms.

The vast herds of buffaloes, the thousands of antelopes, the great flocks of turkeys, the swarms of prairie chickens of former days now exist only in pitiful remnants. A few tame and half-breed buffaloes, "cattaloes," on the Good-night Ranch in the Panhandle are all that are left of the great southern herd that a century ago was counted in hundreds of thousands. Extermination of the animals of the prairie has proceeded more rapidly than in the case of those of the rough or wooded regions. Panthers, catamounts, bears, wildcats, beavers, otters, eagles, swans, white pelicans, and other larger animals have become so rare that the sight of one is quite an event to the average Texan. Game laws are preserving fairly successfully deer,

quails, and doves, but the laws are not very well enforced in those remote regions where game is most abundant. The coon, the 'possum, the coyote (the real prairie dog whose name has been stolen by an overly abundant ground rodent whose bark is doglike and whose entire anatomy is decidedly squirrel-like), eight varieties of skunk (including the phoby cat or spotted skunk, whose hydrophobia qualities are, to say the least, quite hypothetical), seventy varieties of rats and mice and gophers, eighteen varieties of squirrels, nine kinds of rabbits, the mink, the fox, many non-game birds, snakes and insects galore are maintaining themselves with more or less success. The grazing of cattle, the plow, the axe and the gun of the white man have profoundly upset the balance of nature, have affected almost all species, and the end of the resulting changes is not yet. Rabbits and coyotes, wolves, panthers, and other carnivorous animals are sometimes so numerous and harmful that state, local, and even individual bounties are offered for their scalps. To the sportsman the distressing lack of big game is in part met by the abundance of small. Rabbit drives that result in the death of hundreds of rabbits and unlimited sport for the small boy are not infrequent. A recent "rat war" in Atascosa County eliminated nearly a million rats, Guido Struve, a twelve-year-old boy, winning the registered Jersey heifer prize with 17,071 rats to his credit. A recent news item reports that John Corbett, the prince of Texas trappers, in less than six weeks caught forty-nine coyotes, five wildcats, and one lobo near San Angelo. More than 3,000 miles of wolf-proof fence have been built in west Texas in the last few years at a cost of half a million dollars. The

long ears of jack (or jackass) rabbits are often bought with an official price, and the prairie dog flourishes by millions amid a perfect fusillade of abuse which consists more of words than of actions, although he is a frequent target for the "22" rifle. These dogs destroy even the roots of much grass, but are greatly admired by the snakes and the badgers that live upon them, and possibly by the little burrowing owls (amusing in shape and in gestures) who use deserted dog holes for dwelling-places. Out on the great prairies of west Texas the bark of the prairie dog sitting on his burrow mound, the low sweeps of the hawks as they search the surface to catch unawares some rodent, the flocks of the irregularly flying ravens, blue quails running swiftly away, immense flocks of the beautiful lark bunting, mule-eared jack rabbits everywhere, cattle at tanks fed by pumping windmills, fields of milo maize and Kaffir corn, the smoke of trains many miles away, and even the automobile speeding along natural roads between towns a hundred miles apart, are constant features.

Texas is part of a much-used path of migratory birds, and nearly all the North American species of ducks, geese, snipe, and plover are to be found in season especially along the coast, where they swarm in thousands, though steadily decreasing from year to year. Migration brings also black-birds and bobolinks, and numerous songbirds. It is a fact that three-fourths of all the varieties of North American birds have been seen in Texas. The state is a meeting-place of the Atlantic East and the Pacific West, birds of both sections being found. In the extreme south the semi-tropical armadillo, ocelot, peccary, and alligator are to

be found, where also the occurrence of the frigate-bird, caracara eagle, chachalaca, white ibis, roseate spoonbill, sea-gulls, terns, herons, rails, coots, gallinules, egrets, brown pelicans of the whole Gulf Coast, and birds from the East and birds from the West made the "Brownsville country" famous among ornithologists for forty years before it attracted attention as an ideal place for raising "early garden truck." Nowhere else in the United States is there such a diverse combination of birds.

Bats in central Texas dwell by millions in caves that contain almost commercial quantities of guano. They also find a dwelling place in poorly constructed buildings. Swallows nest in swarms along the cliffs and covered places. The diurnal insects of Texas are pursued all day by swallows and fly-catchers, the nocturnal by nighthawks and bats, by poor-wills and chuck-will-widows.

No mention has yet been made of ever-present birds known to all Texans. The buzzard, or turkey vulture, of which there are two kinds, is by day always a feature of the landscape. Soaring at great heights, a black spot against a blue sky, he is a beautiful sight; nearby his naked neck and carrion diet render him repulsive.

"The buzzard sails on and comes, and is gone,
Stately and still like a ship at sea."

So vigilant an undertaker is he that if you put a piece of limburger cheese in your pocket and lie quite still he will begin to consider suitable funeral arrangements for you. He is an untiring scavenger, and the wonder is how he finds food enough to support so many of him. The chaparral

bird or ground cuckoo, almost incapable of flight, erects both tail and crest as it stops after a short run and snaps its beak at you. Fresh eggs and half-grown young are often found in its nest together. The black cowbird is wholly parasitic, laying its eggs always in the nests of other birds. Crows, large long-tail blackbirds, larkfinches, scissor-tails or birds of paradise, blue jays, redbirds, wrens, and the mocking-bird must complete our list of common birds. As Maurice Thompson says, "The last has been called the American nightingale, with a view, no doubt, to inflicting a compliment known to all, of damning with faint praise." The mocking-bird is much more than a consummate mimic, for he has a multitude of songs of his own. His music comes from almost every tree. As Uncle Remus says, "Dey ain't nobody what kin stan' flatfooted an' say dat Brer Bull Frog is a better singer dan de mockin'-bird."

Lizards in great numbers and of more than thirty different kinds are to be found. The little green-striped lizard of the roadside, the large barklike tree lizard, and the big pale bluish-green rock lizard are the best-known species, if exception be made of the horned lizard, which is commonly called the horned frog or toad. Snakes also, it must be admitted, occur in this Texas paradise to the extent of over thirty different kinds. Suffice it to mention the harmless coach-whip, black, bull, and water snakes, and the poisonous coral, copperhead, cottonmouth, moccasin, and eight varieties of rattlesnakes. In spite of numerous tales to the contrary, these snakes with poison fangs are not very numerous. It may be that there are "hills full of rattlesnakes

thirteen feet long," but they are rare and fade farther away the more one seeks them. In seventeen days "we saw only five rattlesnakes where we had been led to expect hundreds," says Vernon Bailey of a collecting trip in the heart of the rattlesnake country! He goes on to add that the largest one he has seen alive was only fifty inches long, and that on the average collecting trip only one or two a month are seen. Yet the present writer is nearly willing to swear that he once saw a rattler that was too big to crawl through a four-inch water pipe at a place where years later one was killed whose middle third was skinned and the stretched skin made a mat thirty inches by eighteen. To support this and to make suitable reading for "Scary William," the following quotations from J. D. Mitchell of Victoria are inserted: "I have had them to crawl away toward cover with the posterior part of their body, the anterior elevated directly over the posterior part and facing me; it is the most aggressive and protective action imaginable. This is the most dangerous attitude the snake can assume, for thus postured he can strike nearly his full length. As he thus moves with his neck flattened, saliva dropping from his mouth, tongue darting back and forth, his rattle sounding and his sickening odor filling the air, his expression is hellish." "Place a rattlesnake where it cannot escape, whip it into a frenzy with a switch, and it will bite itself, sinking the fangs deep into the flesh. I once thought that they intended to commit suicide, but later experiment proved that their bite was harmless to themselves, and that in their blind fury they bite themselves by accident. Caracara eagles, hogs, and some dogs catch and kill rattlers without much ceremony."

On the whole, the snakes are beneficial, for down their throats go mice, rats, gophers, and insects by the hundreds.

“During the mating season the males are very aggressive and will promptly rattle a challenge to an intruder. I have received such a challenge when fifty feet away. Once, on dismounting to fix my saddle, I heard a challenge rattle about twenty feet away. On looking that way I saw a large male about five feet long coming toward me in fighting attitude; when about eight feet off I broke his back with a pistol bullet; this stopped him, but did not change his mind, for he made frantic efforts to get at me before he died.” All the old timers can tell of seeing snakes that were snakes, none of your little ones such as are taken by the “government fellers” who are so prosaic as to apply tape measure to snakes and other animals, thereby ruining many fine stories.

Large alligators are now scarce, but small ones are fairly common along the coastal rivers. In Beaumont a man has made several hundred dollars by raising young alligators on English sparrows. The sparrows are caught in traps and the small alligators are sold to travellers on passing trains.

Turtles and fresh-water fish of the rivers are suffering from much fishing, but still enough remain to form a weak foundation for many otherwise unsupported fish stories. There is an immense variety of species and a large number of individual fishes in the streams of the Coastal Plain. The large-mouthed black bass (often called trout) is the most important game fish, but the various species of catfish,

buffalo, sunfish, and fresh-water drum should also be mentioned. The irregularly flowing creeks and the rivers in the rest of the state have of course neither the variety nor the number of fish of the Gulf and coastal streams. There is a United States fish hatchery at San Marcos, and certain streams and reservoirs are being stocked, notably the Medina Reservoir and the lake at Austin formed by damming the Colorado. The marine fishes of the coast are one of the glories of Texas, whose tarpon fishing is the best in the world. Men come all the way from Europe to fish for the silver king who weighs 150 pounds and who sometimes jumps entirely over the boat of the fisherman. For both food and sport Spanish mackerel, red snapper, sheepshead, pompano, and catfish are caught. In addition, clams, shrimp, and oysters are taken in commercial quantities.

The annual "take" of fish is about 2,500,000 pounds, of oysters 100,000 barrels. During recent years the production has slowly decreased. "The state has fixed the law so successful (oyster) planting cannot be done," says Mr. C. R. Gibson of Rockport. Unrestricted use of oyster reefs and a general hand-to-mouth policy of the oystermen have affected the oyster supply appreciably. The shovel-nosed shark, sawfish, stingaree, shovel-nosed sturgeon, a mullet, three varieties of gars, eleven of catfish, eleven of suckers, three of pike fish, fifty of minnows, eight of herrings, two of anchovies, three of eels, twelve of sunfish, sixteen of darters, six of flounders, three of bass, make a list of not much over one-half of the marine and fresh-water fish of Texas. According to Mr. W. G. Sterett, former



TWO FOES OF THE TEXAS FARMER

Left, a female Texas fever-tick (*Margaropus annulatus*) laying eggs (enlarged); centre, a group of ticks about natural size; right, the adult cotton boll worm (*Heliothis armiger*)

Courtesy of the U. S. Department of Agriculture



A 2,000 POUND RAY FISH CAUGHT OFF GALVESTON JETTIES BY A MAN SEVENTY-FIVE YEARS OLD



Photo by H. H. Morris, Galveston, Texas
A DAY'S CATCH OF SILVER KING TARPONS

Fish and Oyster Commissioner, the Gulf fishes constitute one of the greatest natural resources of Texas.

Ants, wasps, bees, scorpions, spiders, beetles, and butterflies are numerous in variety and quantity. The centipede and the tarantula and the vinegarroon are really an asset, for they rarely or never harm any one, and they are the basis of many horribly interesting tales and an object of never-failing interest to the newcomer. At certain times in the fall swarms of crickets surround electric lights and pile up around buildings so as to disturb city sanitary departments. It is sometimes possible to scoop up beetles by the shovelful; flocks of grasshoppers occasionally harm the crops; plaster ants (really a kind of wood louse) sometimes daub acres of grass with mud; flies and mosquitoes are sufficiently common to cause many houses to be screened. The heel fly, the screw fly, and the horn fly, each after his fashion, afflicts the world. The horn fly sucks the blood of stock; the screw fly, found nearly all over the Americas but commercially important in the United States only in Texas, kindly puts into wounds of live stock eggs that shortly develop into voracious maggots which often enlarge the wounds until their poor hosts perish. The heel fly also is a fearful obstacle to the theory that all things are for the best, for in the spring of the year, when the cattle are thin from the winter scarcity, he attacks their heels with painful bites and causes the poor beasts to rush to the nearest hole of water to stand therein for protection. If the hole be boggy and the cow feeble, she sometimes dies a fearful death. Such, however, were episodes of the olden time when cattle were cheap and roamed at will for miles. Now,

being so valuable, they are carefully protected by man, the tragedy is gone, and there is only amusement in seeing a sleek bovine suddenly twist her tail into a knot and rush abruptly to the nearest pond. The quarantine line, famous among cowmen and running from the Rio Grande north-easterly to the Red River, with the two-fifths of Texas to the west of it above quarantine, marks the area below which cattle are subject to the "Texas fever" (which is not peculiar to Texas) and must be inspected for the fever tick before being allowed to go farther north or west. Five millions of cattle below the line are subject to the attacks of these ticks, which do millions of dollars of damage a year. Prof. Mark Francis of the Agricultural and Mechanical College deserves great commendation in Texas for his efforts to eradicate this tick. This may be done by dipping the cattle in a disinfectant and by removing them from a range long enough to starve the ticks that infest it. It costs about 50 cents a head to dip cattle. The young tick is able to live five or six months without food. For many years "practical" cowmen poured oceans of ridicule upon the scientific veterinarians who were vainly telling them that the tick caused the fever. The Mexican boll weevil, which has invaded Texas in recent years, is a beetle which is extending its habitat eastward along the Coastal Plain. There seems to be a sort of general drift from Mexico into Texas; in recent years the boll weevil, the armadillo, the Mexican and the Inca dove have increased in numbers and spread over wider areas.

We shall conclude this inadequate discourse on the animals of Texas by quoting from James R. Steele of the United

States Signal Service, who was stationed at Brownsville in early days. In fine poetic excess he has described the Rio Grande region as follows:

“The devil put thorns on all of the trees,
And mixed up the sand with millions of fleas;
And scattered tarantulas along all the roads.
He put thorns on the cactus and horns on the toads,
He lengthened the horns of the Texas steers,
And put an addition to the jack rabbit’s ears;
He put a little devil in the broncho steed,
And poisoned the feet of the centipede.
The rattlesnake bites you, the scorpion stings,
The mosquito delights you with buzzing its wings,
The sand burrs prevail and so do the ants,
And those who sit down need half-soles on their pants.
The red pepper grows on the banks of the brook,
The Mexicans use it in all that they cook;
Just dine with a Greaser and then you will shout,
‘I’ve hell on the inside as well as the out.’”

PART IV—THE WORK OF THE PEOPLE WITH THE PRODUCTS OF THE LAND

“Imperial Man! Co-worker with the wind
And rain and light and heat and cold and all
The agencies of God to feed and clothe
And render beautiful and glad the world.”

—*Henry Jerome Stockard.*

CHAPTER I

OCCUPATIONS

"In the labor of engines and trades and the labor of fields,
I find the developments and find the eternal meanings."

—*Walt Whitman.*

THE industrial development of Texas has been natural and even inevitable. Most of the country is peculiarly adapted to agriculture and stock raising, industries that lead men to scatter over wide areas rather than to collect into densely populated centres. Moreover, the white people who came early into the country were largely of Southern and rural origin and were therefore relatively unacquainted with manufacturing. The nature of the country, the sparseness of the population, the character of the people largely predetermined occupations and the general development of industry. It was inevitable that, after the Indian, then should come, in approximate order, the pioneer, the stockman, the farmer, the trader, and the carrier of goods. Manufacturers, professional men, and all that diversified host of workers that marks a thickly settled and highly civilized country were of necessity the last to come, and even at the present time have not arrived in sufficient numbers.

In a new country where a living is easy to make and where the hot summers do not invite to hard labor it was equally

inevitable that the people should tend to be less efficient than those who dwell where Nature yields a living only after much coaxing. Those whom the ravens feed are not likely to be good breadwinners.

The future development of Texas is as inevitable as that of the past has been, and may be predicted with certainty if one is not asked to specify dates too closely. The increase of population will lead to a beneficial competition that will create a greater industrial efficiency. Pressed by each other, if not by Nature, Texans will more and more utilize the immense agricultural resources of Texas. They will raise the various crops in suitable amounts, they will plant good seed, they will conserve the soil, they will store storm water for irrigation, they will drain the swamps, they will nurture finer breeds of domestic animals; in short, they will raise skilfully and wisely a more enormous amount of raw agricultural produce. They will also dig more minerals from the earth, and, by manufacture broad-based upon all the products of the soil, they will make most of the material things that they need, sending their surplus away to get in profitable exchange those things that Texas cannot produce economically, if at all.

Texas, however, as yet has not by any means rounded into a symmetric and properly developed economic whole. She has fallen short of doing so in many ways, a failure which it is a part of the duty of the following pages to point out. Texas is so full of actual achievement and so full of promise that he is no friend to her who fails to point out in what way she has not attained the best. Knowledge of shortcomings is the beginning of their removal.

Most of the shortcomings of Texas are due to the isolation of rural life, which in turn is due to scanty population. This isolation is both physical and mental, bad roads being a cause of physical and poor schools a cause of mental isolation. The poor schools do the most damage, for mental isolation breeds a thousand ills. The community that does not provide good schools for its children is certain to decline compared with the community that does. As has been well said, "A people who think themselves too poor to pay for good schools are likely to remain too poor." Texas children cry out for the bread of learning and are given the stone of ignorance. The city schools are advancing happily, but in the country there is a desperate need of better vocational training for farm workers and of better spiritual training for farm dwellers.

Agriculture and stock raising are the overwhelmingly predominant occupations, absorbing the energies of 60 per cent. of all the workers. Neither of these occupations is being generally carried on in accordance with the best modern practice, though some excellent farming is being done. The small farmer does not raise enough stock, the cowman does not raise enough feed. The "one-crop system" prevails to a large extent, and the diversification of crops is not making much headway against cotton. The farmers are not making as much progress in seed selection as the stockmen in improving the breed of their herds. But, as we have said, the very ease with which a living may be made is an impediment. Why dig and delve laboriously when poor seed planted carelessly will bring forth abundantly? Why raise feed when stock will often winter with-

out it? Why work at all when mild winters and generous summers render work almost unnecessary?

It is fair to say that at present manufacturing is carried on only so far as it is absolutely demanded by the farms, the live stock, and the forests. A blacksmith there must be nearby to sharpen the plow point, the sawmill must stand somewhere near the timber, the packery should not be too far from the cattle. In Texas manufacturing mostly exists only in obedience to such dominant exigencies; as yet it has not made for itself many fields of activity. Indeed, on the whole, it has not done as much as might have been fairly expected of it. For example, the cotton is ginned and compressed in Texas because that much *must* be done to it before it is shipped away, but scarcely 1 per cent. of it is woven into cloth, an amount insufficient to clothe the laborers who raise the cotton. Again, in her railroad shops, Texas scarcely so much as keeps in repair the trains that run upon her tracks, nor does she manufacture a tithe of the machinery that she uses upon her farms.

"The Texas farmer rises in the morning at the alarm of a Connecticut clock; buttons his Chicago suspenders to Detroit overalls; washes his face in a Pennsylvania pan, using Cincinnati soap; sits down to a Grand Rapids table to eat Kansas City bacon and Indiana hominy fried in Kansas lard on a St. Louis stove; hitches a Missouri mule fed on Iowa corn to a Chattanooga plow, and cultivates a farm covered by an Ohio mortgage. When bedtime comes Mr. Texas Farmer reads a chapter from a Bible printed in Boston and says a prayer written in Jerusalem; then he crawls under a blanket made in New Jersey and is kept awake all

night by a barking dog, the only Texas product on the whole damn farm. While he lies awake he keeps on wondering why he can't make money raising cotton." >

Such a state of affairs will not last. Where the raw material is, there will the factories be gathered eventually, particularly if the people become more and more numerous. The pressure of population will cause vocational opportunities in Texas to continue to broaden until she is no longer a state almost of one industry—agriculture—and that industry too much devoted to one crop—cotton. Diversification of industries is nearly as badly needed as is diversification of crops.

Diversification of industries is coming at an increasing rate. In 1880, 69 per cent.; in 1900, 62 per cent.; in 1910, 60 per cent. of the workers were engaged in farming, stock raising, and lumbering; in 1900, 78 per cent.; in 1910, 69 per cent. lived in the country or small towns. This movement away from the country to the towns, so disastrous to the country in so many ways, will have at least this good effect: when people move to town most of them have to work when they get there, and some, therefore, may be driven into manufacturing and into other occupations. A wider variety of occupations will eventually increase the industrial efficiency of the whole community. With manufacturing going on about them, the Texas youth will not be long in learning how to carry it on successfully. Demonstration manufacturing is as much needed as demonstration farming.

We may assume, since the United States is an exporter of food with only 36 per cent. of the people engaged in

agriculture and stock raising, that under modern conditions perhaps a third of the people on the farms and ranches is enough to furnish the entire population with the needed farm produce. In Texas, therefore, as the years advance, we may expect the percentage of people engaged in agriculture and stock raising to decrease slowly from the present 60 per cent. toward 50 or 40 per cent. Texas will probably always be a great producer of raw materials, and the farmer therefore is likely to be in the majority for a long time to come.

The following table compares the situation in Texas with that in the United States as a whole:

OCCUPATION PERCENTAGES

OCCUPATION	MALES		FEMALES	
	TEXAS	U. S.	TEXAS	U. S.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Agriculture	60	36	55	18
Manufacturing and mining	14	25	5	24
Trade and transportation	15	20	4	13
Professions	3	4	6	8
All other occupations	8	15	30	37
	100	100	100	100

The table demands some explanation. About five-sixths of the males above ten years of age and only one-fourth of the females are reported as "gainfully" employed. Matrimony is not regarded as an occupation by the Census Bureau. The work that women do in caring for the home and in raising children is not credited to them in the table. This is unfair to the women; as workers they cannot compare favorably with men when their chief occupations are left out of account. Incomplete and incorrect as such statistics for women are, they nevertheless reveal at each successive census

the rapid increase in the number of women gainfully employed. One woman in seven was reported as working in Texas in 1900; one in four in 1910. The rate of increase thus indicated was much in excess of that for the whole United States.

It is popularly supposed that the negro is seeking the towns and avoiding the farms, but such is not conspicuously the case. On the average, out of every thousand people, 761 are natives, 62 are foreign born, and 177 are negroes, while out of every thousand farmers, 764 are natives, 69 are foreign, and 167 are negroes. Hence there are only 167 negro farmers where there ought to be 177 were the negroes farming in proportion to the whites. This difference, small as it is, spread over the country, has produced a slight concentration of the negroes in the towns, especially in the larger ones.

In numbers, the Texas labor situation is approximately as follows:

	MALES	FEMALES
Total population above ten years	1,600,000	1,500,000
Gainfully employed	1,330,000	370,000
Total population between ten and fifteen years . .	320,000	300,000
Gainfully employed	130,000	66,000
Employed in agriculture and stock raising . . .	810,000	210,000
Manufacturing and mechanical industries	180,000	20,000
Mining	9,000	
Transportation	86,000	4,000
Trade	115,000	11,000
Personal and domestic service	49,000	90,000
Clerical service	30,000	9,000
Public service	14,000	1,000
Teachers	7,000	18,000
Professions	30,000	7,000
	<hr/> 1,330,000	<hr/> 370,000

The numbers following some of the commoner occupations are interesting.

MEN

Retail dealers	45,000	Salesmen and clerks in	
Carpenters	26,000	stores	32,000
Servants	13,000	Draymen, teamsters, etc.	17,000
Bookkeepers, cashiers .	10,000	Clerical occupations .	12,000
Doctors	7,000	Blacksmiths	8,000
Real estate agents . .	7,000	Teachers	7,000
Clergymen	6,000	Commercial travellers .	6,000
Lawyers and judges . .	5,000	Painters and glaziers .	6,000

WOMEN

Servants	35,000	Washerwomen	35,000
Dressmakers, etc. . .	11,000	Saleswomen in stores .	7,000
Boarding and lodging .	6,000	Stenographers, etc. .	5,000
Teachers of music . .	3,000	Housekeepers, steward-	
Telephone operators .	3,000	esses, etc.	3,000
Milliners	3,000		

The numbers of those at work at different ages are as follows:

One-third of the boys from 10 to 13.

One-half of the boys from 14 to 15.

Four-fifths of the boys from 16 to 20.

Ninety-seven per cent. of the men from 21 to 44.

Ninety per cent. of the men over 45.

One-seventh of the native white females of native parents.

One-fourth of the native white females of foreign or mixed parentage.

One-half or more of the negro females.

Laziness is common enough in Texas; loafing on the job is not unknown; the boy often betakes himself unwillingly to school or cotton patch; arduous labor during the summer heat requires some effort. It is perhaps true that Texans

do not work as hard as the inhabitants of colder and more inhospitable climes. Nevertheless, to work, at least mildly, is the rule; to work very hard is common, and an able-bodied man who does not have some occupation is commented upon unfavorably. A man can easily get up a camping party to go fishing for two or three weeks, but he cannot find many people who will loaf all the year round with him. An aristocracy that makes a business of doing nothing has not yet been developed. There is too much child labor out of school and too little in school. The women of the well-to-do families, as in other states, are rarely parasitic butterflies; they are often leaders in all good movements toward greater and more general social welfare.

CHAPTER II

AGRICULTURE

"It don't concern me much to know
What's going on in Mexico,
Or how the folks across the sea
Are gettin' on with butchery.
I'd rather read about the way
Old Farmer Johnson saves his hay
Or how he makes his chickens pay—
I'm farmin'."

—*Whitney Montgomery.*

AMERICANS have often and loudly boasted that their country could feed and clothe the world. Texans have been equally insistent concerning the ability of their state to feed and clothe the United States. Unfortunately the difference between power and performance has been of such a character recently as to introduce louder and louder wailings into what was once an unmixed chorus of boasts and jubilations. Undoubtedly the agricultural possibilities of the United States in general and of Texas in particular are enormous, and persons desiring to jubilate can base their rejoicings on such enormous possibilities and on so tremendous an actual crop and live-stock production that the result per farmer far exceeds that of the husbandman of any foreign country. Contrariwise, persons desiring to ululate can base their wailings on the flow of population from country to town and on the failure of agriculture to keep pace with the increase in population. In agriculture,

as in most other things, there is both the cloud and the silver lining.

Let us look at the cloud a while. Despite agricultural colleges and departments of agriculture, despite fertilizers and seed selection, despite farm papers and better machinery, despite many improvements that have undoubtedly arisen in farming during the past forty years, the exhaustion of the soil is proceeding and the yield per acre of the standard crops has increased but little, if at all, during the past forty years. Witness Texas, where, during the 1870-1879 decade, the average production per acre of corn was 21.7 bushels, of wheat 13.8 bushels, of cotton 0.42 of a bale, as compared with 20.0 bushels of corn, 11.8 bushels of wheat, and 0.34 of a bale during the 1905-1914 decade.

Of course, such production comparisons are not entirely fair. The seasons may not have been equally favorable during the two decades and the acreages planted were obviously widely different, the 1905-1914 plantings including much poor land in the old counties not planted at all forty years ago and much land in the newer counties lying in the droughty regions. Any decreased yields, due to the extension of farms into new areas, is to the credit rather than to the discredit of recent agriculture, but the undoubtedly extensive impoverishment of the soil on the farms long cultivated is wholly discreditable. One has, alas! only to drive about Texas and observe the marked difference in condition between the same crop on the two sides of the road, one on an old farm and the other on land which has been recently plowed for the first time, to realize the loss of productive

power due to bad farming. This situation is not confined to Texas.

Between 1880 and 1910 the population of the United States increased 83 per cent., but the acreage in cereals, two-thirds of all the crop acreage, increased only 60 per cent. In Iowa, almost a model agricultural state, where it is said that "farmers put money into the banks in the place of taking it out," the total population is almost a fixed number and the rural population is decreasing at the rate of 10,000 a year. "The farmers are going on a strike!" cries the alarmist. No wonder that the price of all agricultural products has risen more rapidly than can be accounted for merely by considering the depreciation of gold. Since 1880 the annual value of the farm products has increased fourfold while the amount of the products has not quite doubled.

Live-stock production has failed to keep pace even with crop production. Since 1900 the population of the United States has increased 30 per cent. while the number of live stock has decreased 10 per cent.; the population of Texas has increased 43 per cent. and the live stock has decreased 15 per cent. Mules and goats only have increased faster than the population. Pigs, sheep, and horses have remained nearly constant in number, while, during the same time, cattle have fallen off 15 per cent. in the United States, and 35 per cent. in Texas. Only those who are fond of goat meat or of mules or who have stock to sell can derive much satisfaction from such figures.

During the last quarter century the number of Texas horses has remained nearly unchanged, the number of

cattle has decreased nearly one-half, the number of sheep has decreased more than one-half. Texas, therefore, finds herself with twice as many people and only half as many cattle and sheep as in 1890. She has gained more than 2,000,000 people and lost about 5,000,000 cattle and 2,000,000 sheep! The increasing butcher bill needs no further explanation, and, unless some change takes place in present tendencies, we must perforce become either vegetarians or cannibals.

The cloud is black and needs a large silver lining to render it tolerable. Fortunately this lining, made up partly of actualities and partly of potentialities, is not hard to find. The present cloud in the agricultural sky is due, not to the unavoidable refusal of Nature to provide for the wants of man, but to the comparative neglect by man to avail himself of the bounties of Nature. If we dig wisely we shall reap abundantly. Our present trouble is temporary, a trouble due largely to our failure to dig with sufficient diligence and wisdom.

Texas can be accused more justly of lack of wisdom than of lack of diligence. She has 200,000 more farmers than Georgia, 300,000 more than Illinois, twice as many as any of the remaining states. She expends 60 per cent. of her working energy in farming and stock raising on thirty millions of acres of improved land and on a hundred millions of acres of pasture land. Were all the tillable land under the plow, the twenty-five millions of acres now in crops would be trebled and perhaps quadrupled. Were more intensive methods of farming practised, the yields per acre would be greatly increased. Already Texas is producing

annually more than five hundred millions of dollars of crops and one hundred millions of dollars of live stock; a total production of two billions will be a reality of the not very distant future.

How mortifying to descend from such immense potentialities, from such vast actualities, to admit that a lack of proper agricultural diversification is forcing Texas to import, not the tea of Asia and the coffee of Brazil which she cannot wisely attempt to raise, but much corn and flour and bacon that she could very easily produce within her own borders. The bitterness involved in such importations is not a bit reduced by the presence among them of ten millions of gallons of molasses which also ought to be raised at home.

In accord with a general tendency, Texas is paying more and more attention to the minor crops. The path of greatest progress lies in the direction of more minor crops and more live stock on the farm. Everybody has been dinging this fact into the ears of the farmer for many years, but he is taking his own time about putting crop diversification into practice. His model of diversification, patience, and industry should be Mr. John Stoepler of McCulloch, who says: "I plant everything; if it doesn't come up I plant all of it again next year."

Naturally, since 1850 Texas has had a more rapid agricultural development than the United States as a whole. In 1850 one acre in every 250 acres was improved farm land; in successive decades this one in 250 increased through one in 60, one in 50, one in 13, one in 9, one in 8, to one in 6 at the present time.

The almost explosive increases that took place in values throughout the whole country during the last census decade resulted in doubling the value of Texas farm buildings and machinery and in trebling the value of her farm and pasture lands; in percentages these increases were 105 and 175, the corresponding percentages for the whole United States being 75 and 120. In Texas the increase in the value of land has been more rapid than the decrease in the value of the dollar. Note well the following table, where the numbers set down for 1915 are mere guesses which are designedly underestimates:

VALUES IN MILLIONS OF FARMS AND RANCHES	1915	1910	1900
Land	\$2,000	\$1,630	\$590
Buildings	240	210	100
Implements and machinery	60	55	30
Domestic animals	400	320	240
Totals.	\$2,700	\$2,215	\$960

It is plain that land holding has recently been a profitable occupation. The holding of land purely for speculative purposes is always a betting against time, in which time always wins in the long run. Land values cannot increase fast enough indefinitely to pay compound interest even at a somewhat low rate. The twentieth century so far in this country has been a marked exception to this general rule. Assuming that the dollar of 1900 bought twice as much as the dollar of 1915, the farm lands that were valued at 590 millions in 1900 should be valued at 1,200 millions in 1915, in order for the increase in land value

to counterbalance the decrease in dollar value. Since the farm lands are now valued at 2,000 millions, the Texas owners of rural lands have secured a "rake off" of 800 millions of 1915 dollars in fifteen years. This profit, measured in dollars without any reference to their decreasing value, is 1,400 millions, or 100 millions of dollars a year. City and town values having undergone a similar expansion, no wonder that many landowning Texans have got rich very rapidly in fact and still more rapidly in appearance.

Unfortunately the intrinsic value of the land has been increased but little. Some of it has been cleared of brush and plowed, some has been drained and some irrigated, some has been damaged by erosion and bad management, and some has been invaded by injurious vegetation. As a basis of human welfare it is perhaps worth more than it was fifteen years ago, though it isn't worth three times as much or even half again as much. In money language, however, which is said to be the most eloquent, land has increased on the average from \$5 per acre to \$15. The finest "black waxy" lands of north Texas have increased from \$30 or \$40 per acre to \$100 or \$125, with numerous sales at even higher figures. Many think that the "black" lands are priced too high, the east Texas lands too low, relatively to the lands in other parts of the United States. In the black land the crop per acre is worth less than half the price of the land; in east Texas it is worth as much as the land.

Owing to the effect of the European war on the price of cotton, land prices, both rural and urban, have declined recently. It is obvious that this decline is but temporary. Sales at reduced prices are not numerous, taking place

mainly when the owner is in considerable need of ready money. Already the prices of land are beginning to "recover."

Even in the most densely settled portions of the rural parts of the Black Prairie, even in Dallas and the surrounding counties, not more than 75 per cent. of the land, which is almost wholly arable, is in improved farms. In the state at large, repeating and summarizing, one-sixth of the area is improved land; one-seventh is planted annually in crops; five-sixths is mainly in pasture and forest. The average amount of improved land on each of the 450,000 farms and ranches is a little more than sixty acres. The average size of the 11,000 largest ranches, each one having more than 1,000 acres, is over 6,000 acres. The average size of the 11,000 smallest farms is less than 10 acres. In east Texas the size of the average farm is decreasing, on the Black Prairie it is increasing.

Comparisons between the states are particularly odious because of their frequent underlying unfairness. On account of her vast size, it is especially unfair to compare Texas with her sister states—it is not only unfair, it is mortifying when Texas comes out behind some state which is so small that the engine of a full-sized freight train passes out of the state on one side before the caboose gets into the state on the other side. However, we cannot refrain from giving a list wherein Texas leads her sister states:

First in area; California, the nearest competitor, needing Neyada with her 110,000 square miles to make an equal area.

First in total value of all crops; Illinois and Iowa close seconds.

First in cotton; Georgia, the nearest competitor, so far behind that any remaining cotton state may be added to Georgia without displacing Texas.

First in cattle; Iowa, the nearest competitor with two-thirds as many worth nearly as much.

First in mules; Missouri, the nearest competitor, with less than half as many.

First in goats; New Mexico, the nearest competitor, with less than half as many.

First in pecans, ahead of all the rest of the United States combined.

Texas is not too proud to list some lesser honors. She is second in total value of farm animals, with Iowa considerably ahead and Illinois not far behind; second in bees, California has rapidly pushed Texas out of first place and now produces three times as much honey; second in rice, Louisiana somewhat ahead; third in value of farms, Illinois and Iowa far ahead; third in number of horses, but ninth in value of them; fourth in number of acres of improved land; fourth in sweet potatoes; fourth in corn occasionally; seventh only in number of hogs; eighth only in number of sheep.

Ellis and McLennan counties in Texas contest with each other for the honor of being the banner agricultural county of Texas. It is claimed that in 1914 each of these counties raised a crop whose value was greater than that of Los Angeles County in California, the banner county of the United States.

On the whole, Texas has more occasion to be ashamed than proud of these relative positions, which, after all, are not

very important. The big thing consists in Texas not being as far to the front as she ought to be. An elephant ought to do more than a horse, and "noblesse oblige" is a motto worthy of the attention of Texas, where, according to a recent writer, there are "more cows and less milk, more milk and less butter, more rivers and less water, more farms and fewer barns, more hens and fewer eggs, more boosters and fewer workers" than anywhere else in the world. Such half-earnest gibes are, of course, not wholly true but are much used by all those who are trying to rouse Texas to greater efforts.

KING COTTON

King Cotton threw the paper down
And laughed until he shook,
"It's just the same old tale," he said,
I know it like a book:
The Southern farmers swear to cut
The cotton crop in two,
But when the Spring comes on again
I know just what they'll do.

All through the Fall and Winter months
They try to get my goat,
They try to resolute me down
Or kill me by a vote.
If times are panicky or dull
I have to bear the blame.
But when Spring comes on again
They plant me just the same.

They talk of pumpkins and of peas,
And all that kind of stuff;
It never worries me a bit
I know it's just a bluff.
They talk of sowing down the farm
In forty kinds of grain,
But when another Spring comes round
They make me King again.

They plant me here, they plant me there,
In every nook and spot,
And when they've used up all the ground
They plant me in a pot;
And when the Fall comes on again
And Famine pinches sore
They saddle all the blame on me
And resolute some more.

—Whitney Montgomery.

CHAPTER III

KING COTTON

DEMOCRACY and King Cotton do not get on very well together in the solid South. "Unless a people are educated and enlightened, it is idle to expect the continuance of civil liberty or the capacity of self-government," says the Texas Declaration of Independence. Realizing the truth of this statement, King Cotton tries to attack Democracy by keeping the children in the cotton patch when they ought to be in school. The reins of power will slip from his nerveless hands when a cotton-picking machine is invented or when school terms are properly adjusted to the cotton season. At present, however, from the Rio Grande to the Red River, from the Sabine far out upon the western plains, King Cotton calls loudly upon child labor to serve him.

He is, moreover, a monopolistic old Moloch. The raising of cotton in Texas is a very preponderant industry; at least a third of the 800-million-dollar income of Texas is derived from cotton. The farmers put nearly all of their eggs into his basket and when any accident befalls him most of the eggs get broken at one time. The raising of one crop to such an extent prevents the farmer from distributing his labor evenly through the year and leads, therefore, to much wastefulness of time.

Year by year, in Texas, the value of the cotton crop is

about equal to the combined value of all the other crops. The year 1915 was an exception. Because of the great war, cotton had fallen off in price and the acreage had been reduced, while the other crops had mostly gone up in price and their acreage had been greatly increased. Moreover, a short crop was raised. Perhaps the war, by forcing diversification, may eventually do the South more good than harm. Nevertheless, the drop of \$20 in the value of a bale of cotton as soon as the war broke out when, applied to a crop of more than 4,000,000 bales, made a loss of 90 millions of dollars almost before a gun was fired. In average years, however, the cotton acreage will exceed the remaining total crop acreage and the value of the cotton crop will exceed the total value of all the other crops. There has been much talk of diversification, but the present war is the only influence that seems to have had any real effect in reducing the acreage, and this influence may prove to be only temporary. As soon as the war is over the cotton acreage may go up again by leaps and bounds.

Twenty years ago the boll weevil advanced from Mexico into Texas, spreading ruin among the cotton bolls and terror among the people. The planting of cotton lagged for a few years, but the fear of the boll weevil having diminished, the cotton acreage began to climb again. It was slightly if at all retarded by the invading weevil.

The truth of the matter is that Texas is peculiarly fitted to the raising of cotton. In her black prairie farms she has the largest and finest body of cotton land in the world, and over at least two-thirds of the state cotton is an easy and profitable crop. The dry, hot summers, so destructive



Courtesy of Farm and Ranch

IRRIGATED COTTON IN THE LOWER RIO GRANDE VALLEY. THE COTTON IS GREEN
AND THE BOLLS HAVE NOT YET FORMED



Courtesy of the Dallas News

A TYPICAL EXAMPLE OF THE COUNTRY GIN

The cotton direct from the fields is left in covered wagons to await its turn at the gin; the ginned cotton is left in bales on the ground until hauled home or to market. A few men and horses resting from hauling cotton are to be seen. The country gin is decreasing in number.



Courtesy of the Dallas News

A COTTON PATCH AFTER THE LEAVES HAVE DROPPED AND EXPOSED THE OPENED AND UNOPENED BOLLS. FROSTS OR WORMS HAVE CAUSED THE LEAVES TO DROP

to many crops, fit cotton almost exactly. Cotton and the mocking-bird flourish best in the sunshine. Moreover, the cultivation of cotton is not difficult, and cotton picking, the most time-consuming operation connected with raising it, takes place in the fall, that delightful season of the year when the cooling nights and fresh mornings give early notice that a mild norther will before very long still further herald the breaking of the summer heat. Then it is that the darky cook, after "brilin'" over the summer stove, gives notice to the dismayed mistress that she's "gwine to de cotton patch wid de chilluns" to make more money picking cotton than is possible cooking meals; then it is that a not-always-vigilant constabulary bestirs itself and chases the lazy negroes from their loafing places in the towns out into the cotton fields, where the snowy open bolls are fairly itching to be "picked"; then it is that the country school which has opened too soon in the fall finds itself largely bereft of its possible pupils. Contrasted with the fierce labors involved in gathering corn, with its skin-maddening fuzz, in harvesting wheat to the tune of a self-binder and a thrasher that never tire, in cutting sorghum so high that the breeze cannot get at one, the picking of cotton is a mild and pleasant amusement which permits the pickers to work in friendly groups on adjoining rows and to converse amiably as they pluck the bolls with nimble fingers. Of all forms of child labor the picking of cotton seems to be the least objectionable. Nevertheless it is a man's job to pick cotton diligently all day, dragging a heavy sack along the rows.

Cotton is not picked exclusively or even mainly by negroes. Everybody picks, including father. A large

family is an advantage, "How many children have you got?" being a question often asked of a prospective tenant by a landlord. Some persons maintain that dragging, up and down the rows, the long eight-ounce duck sacks in which the cotton is put as fast as picked is sometimes injurious to the health of young girls. Stooping to the plants and walking on the knees have also some disadvantages. The amount of time required to pick cotton has sometimes been exaggerated. It is not true that there is not enough labor in the South to pick more cotton. Assume a picking season of only fifty working days and a daily pick of only 100 pounds of seed cotton. Each person on this moderate basis could pick over three bales a year, working six weeks to do it. The rural population of Texas could easily pick a six-million bale crop if they had to.

It is in obedience then to natural laws that cotton so prevails in Texas. The average value per acre of the cotton of Texas is far greater than that of the corn or oats or wheat of any of the great cereal states. The cost of raising it is no greater and, therefore, the profit is larger. The consumption per capita of cotton is increasing throughout the world as new uses are found for it. The lint may be kept for a long time without marked deterioration. Despite the tariff help that wool has had, cotton has gained rapidly on wool as a material for textile fabrics. The world is becoming more and more dependent on cotton, and the future of the staple in Texas is almost as golden as the rising sun. Perhaps diversificationists should not urge the farmers to raise less cotton but rather to raise more of other crops*by utilizing the idle seasons when they are not busy with cotton.

Even this they cannot do if it be true, as runs the common saying, that "it takes thirteen months a year to raise cotton." As a matter of fact, it takes more time to raise and harvest cotton than is the case with the other standard crops.

It is possible, though not by any means certain, that the other crops are going to gain on cotton in the next twelve or fifteen years. As a matter of curious fact, the acreage in cotton has grown most rapidly during recent years, when the talk of diversification has been most widespread and continuous. This has been due, not to the unwisdom of the talk, but to the rapid rise in the price of cotton. Beginning with 1880, when the acreage in cotton (2,000,000) was appreciably less than half the total crop acreage, the relative importance of cotton increased pretty steadily, until in 1914 it was somewhat ahead of all the other crops combined. Between 1890 and 1910 the acreage in cotton increased almost exactly 300,000 a year, between 1910 and 1914 the increase was a little more than 750,000 acres a year. Between 1900 and 1910 all the other crops increased less than 50,000 acres a year. This vast increase in acreage of cotton during the last decade has exceeded the total increase in all the other states. Texas has been more and more "cinching" first place in cotton. The 1915 area planted is reported to be from two to three million acres less than in 1914. If so, the total area of the Texas cotton fields is about twice as large as all of Massachusetts. No wonder that Texas produces nearly a third of the total cotton crop of the United States, which in turn produces a generous half of the cotton crop of the world. Sixteen thousand square miles of cotton in an "off" year; twenty

thousand square miles in a good year; an increase of from five hundred to one thousand square miles of cotton a year; a possible cotton acreage of fifty or sixty thousand square miles, with plenty of land left for other crops! It is no idle boast when Texas orators exclaim in fine, forensic frenzy, "She can supply the world!"

ANNUAL COTTON CROPS AND ACREAGES (TRIENNIAL AVERAGES) IN MILLIONS OF BALES, MILLIONS OF ACRES, AND MILLIONS OF DOLLARS

YEARS	WORLD'S CROP	U. S. CROP	TEXAS CROP	TEXAS ACREAGE	TEXAS VALUE
1903-05 . .	18.9	11.2	2.7	7.8	\$155
1906-08 . .	21.4	12.5	3.4	8.9	187
1909-11 . .	22.9	12.4	3.3	10.2	227
1912-14 . .	26.0	14.6	4.5	12.4	265

Turning to almost any compendium of useful information one finds that "cotton" is the Arabic word qutn, qutun, or kutun, but slightly changed. Great therefore is our indebtedness to the Arabians: we owe them for our zero, for algebra, for race horses, and for the thousand and one delectable "Arabian Nights." Moreover, so far as known, we have not paid them back for anything. Qutn appears, however, to have been flax, not cotton, and the earliest reference to what was undoubtedly cotton is in a Sanskrit Sutra of date about 800 B. C., where it is contrasted with silk and hemp and described as the material that formed the sacred thread of the Brahman. India seems to have been the earliest home of cultivated cotton, and it is a curious fact that the plant was known there for so many centuries and yet was practically unknown to the European world as late as two hundred years ago.

In 1696 a pamphlet in defense of wool and bewailing the introduction of cotton was published in England under the title, "The Naked Truth, or, An Essay Upon Trade." The author perhaps thought it better for truth to go naked than to dress in cotton. In 1741 the first Georgia cotton went to England, and in 1784 part of a shipment of fourteen sacks from America was seized at Liverpool on the ground that so much cotton could not have been produced in the United States. When released it lay for months unsold because the spinners doubted the profit in working it up. After the War of 1812 cotton production in the United States rapidly increased, but the total crop in the banner year before the Civil War was somewhat less than the 1912 Texas crop.

The botanists tell us that cotton is a member of the mallow family, which includes okra and the hibiscus. Cotton is a native of the tropical parts of both the new and the old worlds, but seems not to have grown wild in the United States. In the tropics the plant is not an annual. Many different varieties of the wild plant are known, and like all living things which have been cultivated or domesticated for long centuries, and which have numerous wild varieties, the exact origins of the various kinds of cultivated cottons are unknown.

Great commercial good would come from a more careful study of the wild cottons in various parts of the world, from more extensive hybridization experiments, and from a more careful and general selection of seed. Something is being done to improve cotton in Texas, but not enough. Mr. A. D. Mebane, of Lockhart, has bred a new variety from a "sport" and has done careful seed selection. His "Triumph" cotton is being extensively planted in Arizona

and southeast California as well as in Texas. "Rowden" is another well-known Texas variety named after its originator. The "Lone Star," a third popular Texas cotton, is due to Mr. A. M. Ferguson of Sherman.

Prof. R. L. Bennett has shown that seed selection should be directed toward securing short jointed plants which fruit at every joint, which mature early, and which have large bolls. Early cotton, he maintains, does not necessarily have small bolls and short lint. Mr. W. S. Ownsby, of the Cleburne High School, is spreading good seed selection practices among the Johnson County farmers. In general, however, it may fairly be said that Texans have done very little to increase the good qualities of their chief crop. Mr. Robert Munger of Dallas had added several important improvements to the cotton gin, of which he is a manufacturer in large numbers at Dallas and Birmingham, Ala.

Sea Island cotton has been greatly improved; why not Texas Upland? Sea Island has had its lint increased in length by three-fourths of an inch to two and one-half inches, its lint made of more uniform length, its time of maturing shortened, its productiveness increased. Cotton is capable of improvement in more ways than the creek that needed only to be widened and deepened and lengthened to rival the Mississippi. In the cotton "want" column we find greater yield, longer lint, stronger lint, greater resistance to disease, less shedding of bolls, less loss from open bolls, and in north Texas particularly, quickness in maturing. Standard methods of seed selection will certainly meet most of these wants.

Commercially, the most important difference between varieties is in the length of fibre produced, which ranges from two inches in Barbados Sea Island cotton through one and one-half inches in long staple cotton, to less than one inch in "half and half" and certain Asiatic cottons. "Good Middling Texas" has a fibre about an inch long. The long-fibre cottons are worth three and even four times as much per pound as the others. "Half and half" cotton, so called because half by weight is seed and half lint, has a short fibre, seven-eighths of an inch at most. It lacks uniformity, has a poor storm resistance, and is generally undesirable. It has come in only recently and should soon go out. The strength and amount of twist in the fibre also affect the commercial value. The true cottons are distinguished from the silk cottons by this twist in the fibre which so greatly facilitates the spinning of the fibre into thread. The varieties of the true cottons are further distinguished by the relation of the fibre to the seed from which it grows. Ordinary American cotton bears both long and short hairs, while Sea Island cotton has long hairs only. In the latter the hairs are easily detached, leaving a bare seed; in ordinary American, Indian, and African cottons the long hairs are fairly easily removed in the ordinary "saw gin," leaving the seed completely covered with a short fuzz that is only removed with difficulty in preparing the seeds for the manufacture of cottonseed oil and meal. This fuzz (later removed by a separate process) gives rise annually to many thousands of bales of "linters."

There is a great dearth of useful scientific knowledge about cotton cultivation. Rest restores fields, but in rare cases some

fields have been planted for forty years continuously without fertilizers and without diminution of crop. The fibre takes nothing practically from the ground, any exhaustion of the soil being due to what the seeds take away and to the burning up of the humus of the soil which results from shallow cultivation.

A word to the wise concerning the cultivation of cotton, which will grow on many kinds of soil, preferably those whose moisture content is not very variable and not too great. Too much moisture and fertility in the lowlands cause the plant to "go to stalk," to grow tall and beautiful, only to produce but little fruit, while the more stunted plants of the sandy uplands are covered with bolls. A deep, well-drained loamy soil is best. Given plenty of hot sunshine, and not too much moisture or wind, cotton will flourish like the proverbial bay tree. It is planted thickly in rows, "chopped" to a "stand" with a hoe, cultivated both clean and shallow. Six plowings and three hoeings are required to keep the "drill" clean and raise a crop. There results a great leaching of the soil and loss of humus. Whether subsoil plowing is advantageous is a moot question, and how to fertilize for cotton is as yet almost unknown. How properly to plant cotton in "rotation" with other crops and how to keep it from shedding so many of its "forms" (buds) and bolls is as yet a mystery.

Cotton planting begins early in March in south Texas, where the first blooms appear about May 15th, and the first bale about July 10th. In north Texas the crop is from three to five weeks later. The first bale each year in a

county is usually sold at a premium, the producer getting a new hat or suit from the town merchants and a certain amount of local fame. The "first bale" for Texas and the United States is of course a greater glory to its producer and to its locality. Lyford, between Corpus Christi and Brownsville, in the Magic Valley, has produced the first bale in the United States for three successive years. In 1914 its first bale was sent to Houston on July 3d.

In Egypt the scarab, or dung beetle, was greatly esteemed as the symbol of immortality, and was sacred to the sun god; in Texas the boll weevil, or cotton beetle, is greatly hated and universally consigned to the devil. According to the darky preacher, "divers diseases" was the worst sort of disease mentioned in the Scriptures; similarly, the boll weevil to the cotton grower is the worst among the 23,000 species of weevils known to science. All the weevils eat plants, but the boll weevil is the only one that injures cotton to an appreciable extent, its ravages having been estimated as high as \$15,000,000 to \$20,000,000 a year in Texas alone. This destructive insect, which caused great damage around Monclova in Mexico in 1862, appeared in Texas about 1893, in Louisiana in 1905, in Mississippi in 1907, and has recently been reported in Georgia; on the north it has passed into Oklahoma and on the west it has gone nearly as far as cotton is planted.

The adult weevils first puncture and then insert their eggs in the cotton flower-buds, which drop from the plant as the weevil eggs develop into grubs. Later they lay their eggs in the young cotton bolls which discolor, crack, and are ruined as the grubs develop. No remedy commerci-

ally applicable is known. The boll weevil is very prolific and hard to kill. A negro song seizes upon these qualities:

“Fus time I saw the boll weevil, he was settin’ on the square,
The nex’ time I saw him, he had all his family there.
The farmer takes the boll weevil and puts him on the ice,
The boll weevil says to the farmer, ‘This certainly is nice.’
The farmer takes the boll weevil and puts him in hot sand,
The boll weevil says to the farmer, ‘This certainly is grand,
For I’m looking for a home, jes’ a looking for a home.’”

The farmers and scientists, therefore, in fighting the boll weevil are plunged into difficulties. A few birds eat him; the Guatemala ant, the “kelep,” is said to be very fond of him. Unfortunately, the kelep cannot stand the northers and is not available. In Guatemala there is a weevil resistant race of cotton which may enable a similar race to be developed in Texas. Burning the cotton stalks at the end of the picking season and planting early maturing varieties tend to reduce the boll weevil. Dry weather is unfavorable to this pest. Certainly the scare and perhaps the damage due to the boll weevil is not as great as ten years ago, although 1915 was a year of many weevils and much damage.

The boll weevil is not the only enemy of cotton, the boll-worm ranking second and the army-worm third in destructiveness. Locusts, cut-worms, leaf-bugs, blister mites, “cotton stainers,” and various other insects feed on cotton, and all told, do nearly as much damage as the boll weevil alone. “Root rot,” “wilt disease,” and “boll rot” are three fungoid diseases which also do damage in Texas. No

remedy is known for the first and last, but some progress has been made by Mr. E. L. Rivers of South Carolina in breeding by selection a wilt-resisting stock. In general, these pests prevail more in rainy seasons than in dry.

Cotton-picking time is three months or more in length. Blooms, green bolls, and ripened cotton may be found on the same bush at the same time. The open bolls will drop their cotton to the ground unless it is gathered within a reasonable time that varies with the kind of cotton and with the amount of wind and rain; consequently as cotton ripens it is picked, the same field being gone over several times as the bolls open and disclose the snowy cotton. The picking season lasts from July to November, and the fields are often white with cotton in December. A small child can pick his quota of cotton, so whole families camp by the sides of fields, and "cotton-pickin' time" is a period of social festivity as well as of profit.

The dropping of the cotton fleece to the contaminating ground, the grabbing of twigs and leaves by careless pickers, the leaving of the picked cotton in piles on the ground, all cause damage to the cotton which ginning does not wholly remove. The owner desires that his cotton be picked promptly and often, the picker that the cotton be mostly open and ready to pick so that much may be gathered in a day. The prices paid for picking cotton vary of course with the prices of both cotton and labor, hovering around 65 cents per 100 pounds of seed cotton. Since the seed weighs two-thirds and the lint one-third of the total, the cost for picking 100 pounds of lint cotton is about \$2. Numerous tales of persons picking four and five hundred

pounds of seed cotton in one day are to be heard from the lips of the local Munchausens; 900 pounds have been picked, but 300 pounds are a good day's work for a grown man under the most favorable circumstances.

“Me an’ my pardner an’ my pardner’s frin’
Can pick moh cotton than a gin can gin.”


Of course the amount of open cotton on the stalks has much to do with the amount that may be picked. Once a boy worked for three weeks to pick a single bale, but was given all the cotton for picking it. The time taken was not due to marked laziness but to the fact that a drought had smitten the cotton so that the bolls dried up without opening and twenty-five acres were required to produce the bale. To pound open the dried bolls with a hammer took time. Now a machine would hull and gin such cotton in a very little while.

Despite strenuous efforts to make one, no very successful cotton-picking machine has yet appeared. When it does it will upset the cotton patch, a social institution, and cause an industrial revolution. There will be comparatively little to do in the fall but to watch the machine, to gather pecans, to eat, and to go fishing or hunting.

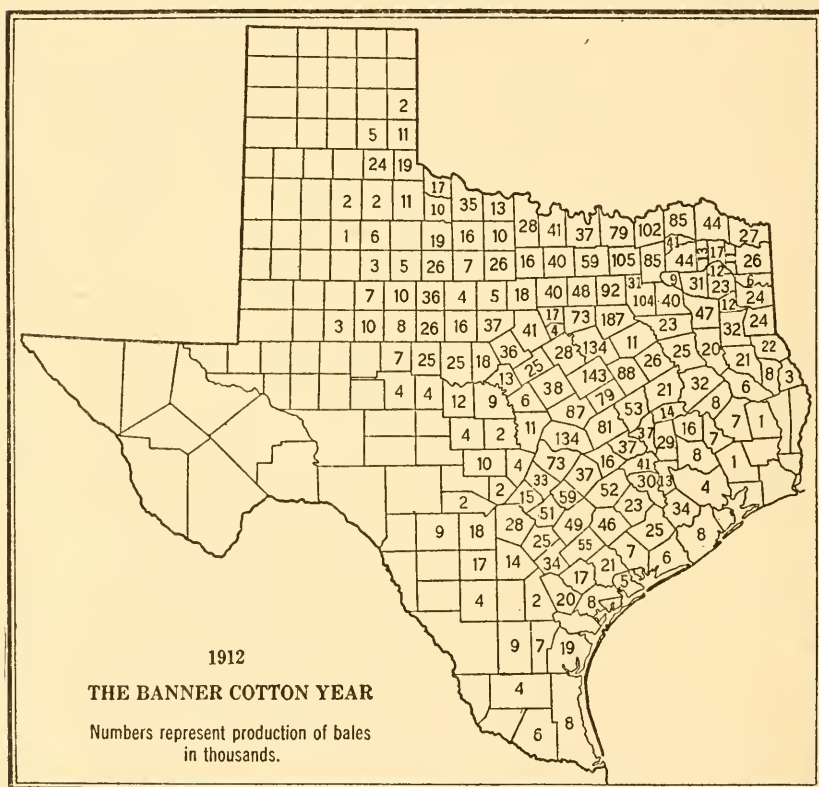
After being picked and loaded into wagons the cotton is hauled to one of the 4,000 Texas gins, is there sucked from the wagon up a spout and run through the gin which saws the lint from the seed and delivers the lint to the press and the seed to a bin. The country gin is decreasing in numbers, with a marked tendency toward bigger and better gins. The gin operates very much after the fashion of a boy

eating watermelon: the seeds drop outward from the corners of his mouth and the pulp slips downward to his stomach. Pressed into bales, sold by the farmer, or, as is unfortunately too often true, used by him to pay debts contracted while raising it, the bale wanders to the railroad, is shipped to central points, and is there compressed. It drifts on through Houston to Galveston and there takes ship for Europe and the North. Very little Texas cotton is manufactured into Texas cloth, most of it going to Europe. To press cotton into a bale and then to compress it into a smaller bale is a wasteful process involving much loading and unloading of freight cars, much delay, and much expense. The sampling of bales, the bagging and ties that hold and protect the bale are all subjects of violent controversy and seem to be capable of much more satisfactory adjustment.

Snow time in Texas is not in winter but in the fall, when cotton is everywhere and the fields are white with the open bolls. Under the trees or out in the open stand wagons loaded with cotton. Piled on the ground are huge cones of cotton, local Fusi-yamas which grow by the labors of the pickers. Around the gins are wagons loaded with the unginned cotton, piles of seed, and hundreds of bales of ginned cotton ready for shipment. On roads in wagons, on railway platforms, in cotton yards, on freight cars, are thousands of bales. Just as the rivers carry the waters southeastward to the Gulf, so down the railroads to Houston and Galveston flow most of these bales, making Houston the greatest cotton market in the world and Galveston second only to New York as a port of exit for American produce.



The heaviest cotton-producing region in the world is the Black Prairie, where many counties have produced each more than 50,000 bales in a year. In fact, Ellis County has nearly touched 200,000 bales, and Waxahachie, its county seat, is the greatest farm cotton market in the world. More bales from the farms reach the trains at



Waxahachie than at any other point in the world. McLennan, Williamson, Hill, Collin, Kaufman, and Fannin are the other counties whose cotton crops have each exceeded 100,000 bales. East Texas has something to say for herself, however. "On exhibition in the Cotton Ex-

change in New York City is a bale grown in Panola County. It took first prize at the Philadelphia Centennial, at the World's Fairs in Paris, Chicago, and St. Louis. Enclosed in silk bagging and encircled by silver ties, it is a permanent tribute to east Texas."

As population advanced westward so did cotton, which is now raised far up in the Panhandle where formerly deemed impossible. This westward and northern extension of the cotton area has been in part due to the invention of a gin that successfully extracts the cotton from bolls which remain unopened because the frost caught them before maturity. Such cotton is known to the trade as "bolly."

The contestants in the Boys' and Girls' Texas Cotton Club have each year averaged over a bale to the acre. In 1914 the average was a bale and a third. A fair number of contestants have exceeded two bales, and one or two have gone above two and a half. Ovid G. Myers of Cookville made 2.67 bales in 1913.

COTTON YIELD AND PRICES

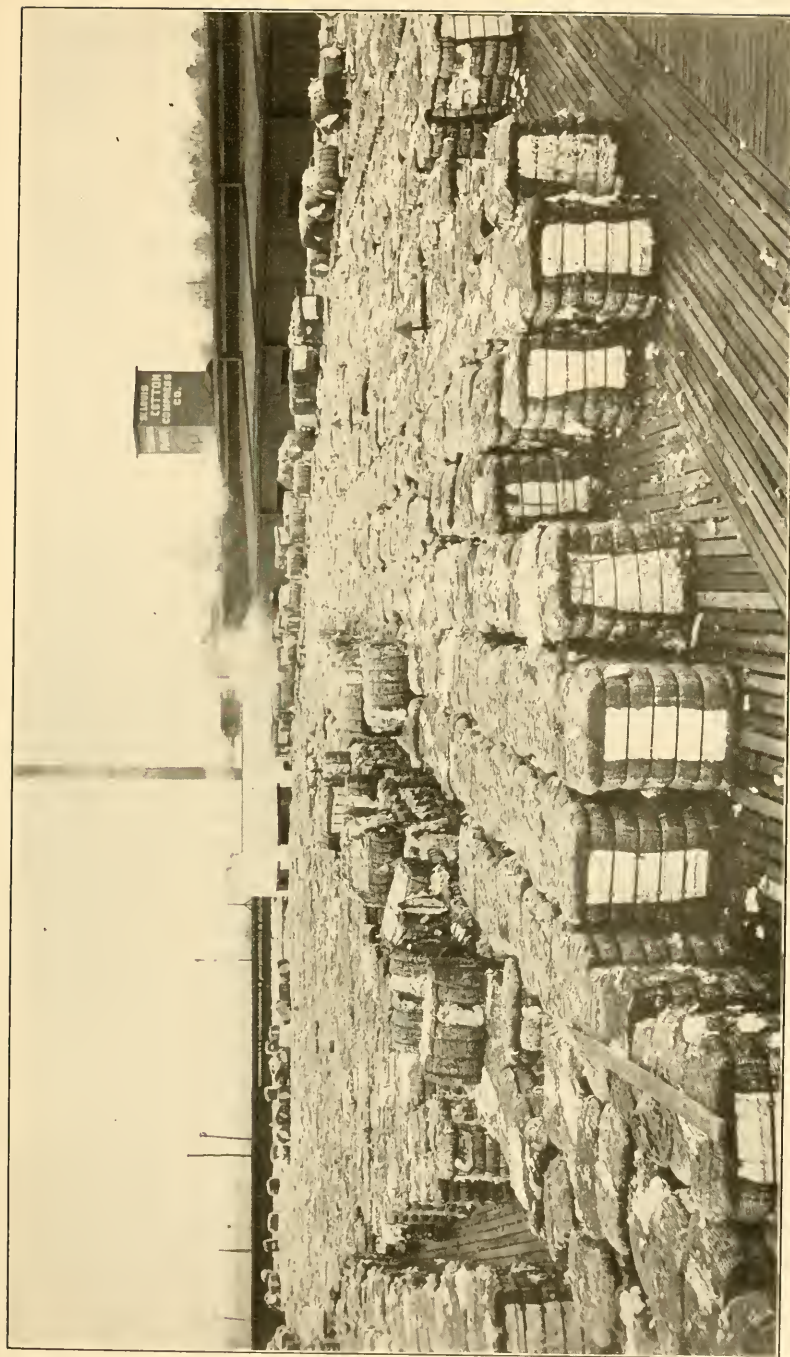
YEARS	YIELD PER ACRE TEXAS	BALES U. S.	FARM PRICE TEXAS	MIDDLING GRADE U. S.
1870-79	0.42	0.35		
1880-89	0.37	0.34	43.00	45.00
1890-99	0.38	0.36	34.00	34.50
1900-1909	0.34	0.37	47.00	48.50
1910-13	0.33	0.37	57.00	58.25

The American bale is said to be the dirtiest package in commercial use, and tales are told of astonished English

manufacturers discovering cook stoves and other weighty articles when opening bales. This method of disposing of useless household furniture, however, has fallen into disrepute since the installation of a system of numbering bales which enables the places of origin to be traced. "Country damage" is the name applied to the dirt that gets into cotton before shipment and to the rotting of the fibre through exposure.

For many years after the Civil War cotton was the one "money" crop. It could be kept easily, and money could be borrowed on it before the crop was raised. Owing to lack of quick transportation, scarcely any other crop had a cash value, but must be consumed at home. There was in the South plenty to eat and little money, and cotton was the one crop that brought money. Hence arose the "one-crop" system and living by buying on credit from the local grocery until the crop was raised. It is a bad system, but not a necessary accompaniment of cotton farming, for much cotton raising does not necessitate the raising of nothing else. The one-crop system is merely a bad habit that may be broken by diversification on the part of the farmer and by a different credit system on the part of the local merchant and banker.

"Farmer went to the merchant
To get some meat and meal;
Merchant says to the farmer,
'Boll weevils in your fiel!'
The merchant got half the cotton,
The boll weevil got the rest;
The farmer's wife had nothing
But one old cotton dress."



PLATFORM LOADED WITH 7,863 BALES OF COTTON AT COMPRESS AT TEXARKANA

Courtesy of the Dallas News



A TEXAS INDUSTRIAL CONGRESS DEMONSTRATION CROP OF CORN
Raised by E. M. Woods at Gladewater. Planted April 13th; picture taken
July 30th

Raising so much "from the bush that bears fleece more beautiful than the wool of the sheep," as the Greeks of Alexander's army over twenty-two centuries ago described the cotton of India, raising far more cotton than her people can possibly use, Texas is very largely dependent for her prosperity upon a market for cotton and upon the price of the staple in the United States and in Europe. Hence it has happened in "the fatal sequence of the world," that the shooting of an Austrian Archduke has caused tenant farmers in Texas to suffer by thousands. The great European war at first so checked cotton exporting that for the first time since the Civil War there was no market and sales were nominal at 8 cents per pound, and even lower. So profound was the effect on Texas trade that a special session of the legislature was called to provide legal facilities for marketing, for building warehouses, for holding the cotton till the war ended. Commercial bodies, farmers' unions, all sorts of organizations arose to attempt to finance the farmer, whose cotton was his only security. The "Buy-a-bale" movement started by some unknown philanthropist resulted in the purchase of a considerable number of bales from tenants. This movement affected prices more by its moral force than by the number of bales actually purchased. The whole situation, in large part irremediable, and due to a real decrease in the demand for cotton, emphasized strongly the need of a better rural credit system in Texas.

Until after the Civil War cotton seed, now selling at nearly \$40 a ton, was regarded as almost worse than worthless. It was occasionally fed to milk cows and plowed under as a fertilizer, but usually accumulated around gins,

where it was considered to be a nuisance. An antebellum law in Mississippi fixed a penalty of \$20 a day on a ginner who permitted cotton seed to remain near his gin in undue quantities, and a penalty of \$200 for the throwing of cotton seed into streams. It was hard to burn, and when thrown away it rotted, emitted bad odors, and gave divers diseases to the pigs and cows that ventured to eat it. Nowadays, when a specialty is made of utilizing by-products and the packeries are trying to sell pig squeals to college boys for use at football games, cotton seed is cherished like the diamonds of Kimberley. From 1,500 pounds of seed cotton there comes a 500-pound bale of lint and half a ton of seed, which last contains, at present prices, four or five dollars' worth of fertilizing material. Greater value may be obtained by removing the hull of the seeds from the meat within, the seeds by weight being nearly half hull and half meat. The meat when pressed yields one-fourth oil and three-fourths "cottonseed cake," the hulls furnish excellent fibre for high-grade paper and bran for cattle. Some day they'll make a new breakfast food out of hulls. The cottonseed cake exceeds corn and wheat by 60 per cent. as a cattle feed, being very rich in proteins, fats, and bone-making materials, while relatively poor in carbohydrates. Cottonseed oil appears in protean forms, ranging from "genuine" olive oil and lard to soap and phonograph records.

There are now more than 200 cottonseed oil mills in Texas crushing all the seed that is not fed directly to stock or used for replanting. At present about one and a half million tons of seed are crushed annually in Texas, from which about fifty million gallons of oil are extracted. Nat-

urally Texas leads in the production of raw cottonseed oil.

Bugs, beetles, and butterflies "work up" more of Texas cotton than does the Texan himself. The humming-bird in proportion to weight weaves more sycamore fuzz into nests than the Texan weaves cotton into clothing. Scarcely 1 per cent. of the Texas cotton is used in cotton manufacture in Texas. Nor is the industry increasing as rapidly as the average industry. Less than twenty establishments, employing some 2,000 persons, are engaged in it. Perhaps the Texas climate is not suited to it. Weaving cotton yarns and cloth is said to be very dependent on the humidity of the air, which greatly affects the behavior of the raw fibre. Artists have often deplored the lack of atmosphere in America; must we also deplore the lack of Lancashire humidity in Texas? The main reasons, however, for the failure of cotton manufacturing in Texas are the lack of skilled labor (which can find more remunerative employment in other ways), the lack of experienced management, and the prevalence of high interest rates. Five or six of the mills have nevertheless been very successful, manufacturing duck chiefly. C. W. Post of Postum fame built in west Texas a cotton mill that sucks the cotton from the farmer's wagon, gins it, weaves it, and delivers hemmed sheets and pillow cases for shipment to New York and Chicago.

CHAPTER IV

FROM CORN TO CAULIFLOWERS

"Bring the bankers and the brokers;
Bring the engineers and stokers;
Bring all the politicians now extant;
Bring the butchers and the bakers,
And the hot temale makers,
And let 'em tell the farmers what to plant.

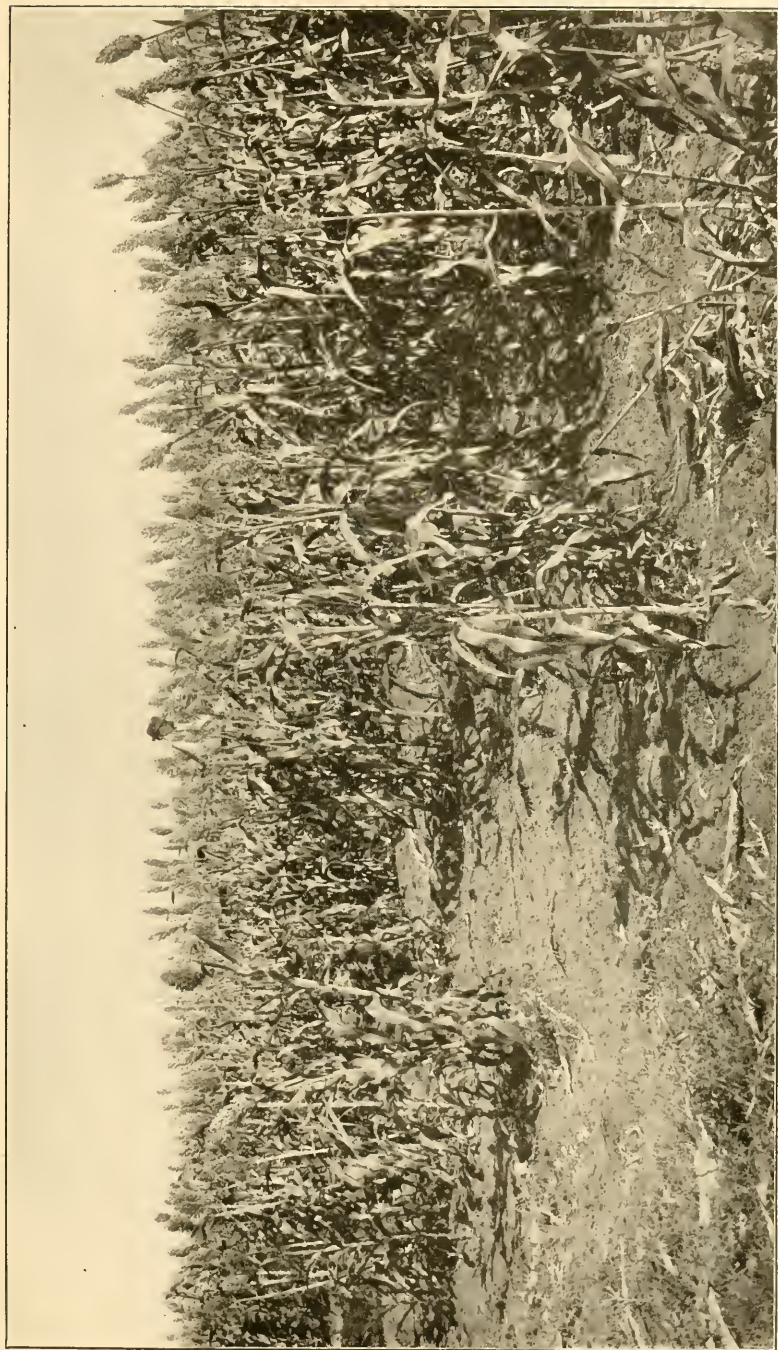
.

But by the grace of Yankee Doodle,
We will tell the whole caboodle
We're going to plant exactly what we please."

—*Will P. Lockhart.*

REMOVE the cotton from the Texas crops and there is left a vast and various assortment of lesser crops whose total value is about equal to that of the cotton itself. In other words, leaving cotton and live stock out of account, there is raised annually between 200 and 300 million dollars' worth of farm produce. This total is sufficiently imposing to create some interest in its constituent parts.

Here and there in south Texas a banana tree flourishes except when it is shivering in the grip of an unusually cold norther. The fig, the orange, the lemon, and the grapefruit maintain themselves along the coast, and while damaged by the severer northers, nevertheless, with proper management and freeze-resistant varieties, promise to become very profitable crops. In the Panhandle the staple



Courtesy of Farm and Ranch

FERTITA ON THE STATE EXPERIMENT FARM AT CHILLICOTUE



Courtesy of Farm and Ranch

SIX TONS OF ALFALFA PER ACRE ON AN IRRIGATED FARM IN THE PANHANDLE

SUDAN GRASS, STATE EXPERIMENT STATION, SPUR

HAULING SUGAR CANE TO MARKET, LOWER RIO GRANDE VALLEY

LOADING POTATOES IN FIELD NEAR HOUSTON

crops of the Northern States flourish only a little incommoded by a too ardent summer sun. Between these extremes a thousand different fruits, vegetables, and field crops grow with astonishing but somewhat variable success. Texas crop averages give one but a poor idea of the enormous crops that are raised in the most favorable seasons. The stories so often told of men buying land at prices that astonished the old settlers and then making enough to pay for the land out of the first crop are mostly true. Unfortunately, many of the stories about failures are also true. Something depends on the climate, but a great deal depends on the farmer. The good farmer combined with the good season makes one kind of a story, the poor farmer and the poor season make another.

If cotton be king, certainly corn is a duke, and it would strain the aristocracies of the world to furnish a title for each of the many crops. Earl and marquis, begum and rajah, judge and colonel, would all be used before we got down to soy beans and feterita, onions and asparagus. An agricultural durbar could be held in Texas that would put to the blush any royal durbar ever held in India. At its head would march King Cotton, scattering over Texas 300 millions of golden dollars in good years and 200 millions in bad. The King, Nottoc as they call him in Houston, having passed, it is now time to adjust our eyes, dazzled by these millions, that we may see the lesser splendors of the attendant nobility.

Corn comes next to cotton, producing nearly 100 millions of dollars a year despite the fact that the Texas droughts often catch the corn at critical times and thereby greatly

reduce the yield. Corn is a crop that must have rain at certain times to produce well, and sometimes the fairest prospects are quickly blighted by a drought. Hot winds, which sometimes occur at times of unusually high temperatures, have been known to kill corn in a few hours. No wonder, therefore, that the Texas average is only twenty bushels to the acre, six below the United States average and fifteen below the banner corn states of Ohio and Illinois. However, not all of this falling below is due to the climate. The Texas Industrial Congress in 1911 began offering prizes for record-breaking crops. E. S. Kovar of Fayette was first in 1911 with almost 116 bushels of corn per acre, Alford Branch of Overton won with 167 bushels in 1912, Joe Dvorak of Sugarland with 152 bushels in 1913, J. H. Ross of Henderson with 164 bushels in 1914. More important than these records is the fact that the thousands of contestants scattered over most of Texas averaged a little more than 60 bushels to the acre in 1913, in 1914, and in 1915. In 1911, a very bad crop year, when the state average was only nine bushels to the acre, the hundreds of corn contestants averaged thirty-one.

Corn follows cotton from county to county and is grown all over the eastern two-thirds of Texas in rough proportion to the population. Collin in the black land belt is the banner corn county. A farm is rarely planted entirely to corn, which is generally grown in rather small patches on nearly all the farms. The annual crop has reached 200 millions of bushels, but in bad seasons it drops below 100 millions. Even in the worst years there are plenty of luscious roasting ears, with plenty of butter to smear upon them.

Unlike corn, wheat and oats are somewhat localized, the wheat more than the oats. These crops grow mostly from the Red River southward over the Grand Prairie and the Red Beds, though scattering far beyond these limits. Denton is the banner wheat country, with Wichita second; Grayson is ahead in oats, with Collin second. The amount of wheat and oats planted in successive years is quite variable. For a long time there was a marked decline, but an increase has taken place in recent years—an increase markedly accelerated by the European war and consequent low price of cotton. Texas is now able to supply all of her people with white bread made from wheat grown at home. The Texas demand for oats is such that it will absorb almost any amount that is raised, even the 40,000,000 bushels of a banner year. Normally about 1 per cent. of the area of Texas is being used to raise both wheat and oats.

Loud wailings have been legitimately based on the sad fact that Texas has been importing annually many millions of bushels of corn, oats, and wheat. Texas is too far south to be peculiarly fitted to grow these important cereals, which seem to flourish best in the central parts of the temperate zone. Nevertheless, the production per acre of oats and wheat is well abreast of the United States average, even if the production of corn is a little below. Records of more than 3,000 pounds of wheat to the acre are not very rare. It is not economical to raise bananas in Nova Scotia or to manufacture lawn mowers far from the iron and coal needed to make them and from the grass they are to mow. No such objections may be urged to the proposal to raise more cereals in Texas. In good years they will produce abun-

dantly, and wheat and oats mature so early that favorable summers permit of the raising of a second crop of some kind on the stubble land. Moreover, under present conditions, the farm value per acre of Texas wheat and oats is greater than it is in the great wheat and oats states, yet the percentage of farms raising corn and oats seems on the whole to be decreasing.

We come now to that aquatic cereal, rice, planted for forty centuries, the staple food of a half of the human race, greatest among the irrigated crops, and planted to the extent of 250,000 acres in suitable places on the Coastal Plain, chiefly along the Neches River in Jefferson County and along the Colorado River in Matagorda and Wharton counties. Practically all of the rice fields are irrigated by pumping from streams or wells. The total cost of the necessary embankments, ditches, and pumping machinery has been from \$10 to \$20 per acre. The ditches, by the way, are on the top of the land. In Texas the details of rice and wheat growing are nearly the same, exception being made of the fact that the rice is grown in water. The yield and the quality of the rice have been better than in Louisiana. The water stands from four to ten inches deep, according to the height of the rice. The land, of course, must be drained before harvest. The average yield has been close to thirty-five bushels per acre. The Blue Rose is the best variety in yield and is the most hardy, though Japan and Honduras rice are extensively planted. Too much rain and wind during the harvest season is the rice grower's chief trouble. A failure of the water supply for the pumping plant is, of course, ruinous when it occurs. The large pumping plants

sometimes reverse the courses of the streams and in times of drought draw salt water from the Gulf up the rivers.

Between 1900, when there were only 9,000 acres in rice, and 1906 the rice industry practically began in Texas, 200,000 acres being planted for the first time during those years. There was a boom, and many persons ignorant of rice lost money in trying to raise it. Extensive irrigation projects were undertaken; many went into the rice business, and even from far Japan, forgetting geisha girls and cherry blossoms, came a hundred or more Japs to labor in the Texas rice fields. Since 1906, however, the development has not been very rapid. This is not the first time that the rice acreage has been nearly at a standstill: in 1850 there were 110 acres in rice; in 1890 there were 135. Rice is generally handled in large acreages; what is practically one management, for example, handles 30,000 acres near Houston. Farms of a thousand acres are common.

Lack of drainage causes the water in which the rice grows to "sour" the land. The remedy is to plant the land frequently in dry-land crops or to let it lie out, planting rice only about a half or a third of the time. This remedy gets rid of the second-growth red rice and other aquatic plants that flourish in shallow water to the detriment of the rice, but reduces the rice acreage, and unfortunately disturbs the otherwise happy bullfrogs and crawfishes, who do not understand why the big pumps that ordinarily send small rivers of water through long ditches to their rice fields have quit working.

What a contrast to turn from the water-covered rice fields to the dust-covered fields of Kaffir corn and milo

maize planted by the dry farmers of the highly evaporative west. Where the rainfall is between fifteen and twenty-five inches these forage crops have increased rapidly in popularity and are destined to be raised in ever-increasing amounts unless displaced by the recently imported African feterita, or Sudan grass, or other similar and better crops. The relative merits of cowpeas, soy beans, and various kinds of millets and sorghums are continually being tested, the United States Department of Agriculture wisely importing new varieties from Africa and elsewhere. Just now Sudan grass and feterita are being tried extensively. Each is new to America, while Kaffir corn and milo maize have been raised for years. The farm journals are full of articles on these various forage crops which, collectively, are of very great importance. Something over a million acres are now being planted with Kaffir corn, milo maize, sorghum, millet, feterita, Sudan grass, Hungarian grass, Egyptian wheat, emmer, spelt, Johnson grass, and alfalfa. The value of these forage crops runs close to fifteen millions of dollars. Their food value is high, and when cut at the right time they make a most excellent ensilage for those huge cans called silos. A windmill and a house, a cattle pen and some trees about the pond, a small garden and a big patch of Kaffir corn or milo maize are the external essentials of a northwest Texas home. In the Texas Industrial Congress contests the average production per acre (in each case about three times the state average) was more than two tons one year and three tons the next two years. The best individual records are in the neighborhood of five tons of fodder, including 150 bushels of seed. Mr. F. W. Davis, Commis-

sioner of Agriculture, thinks that it will not be long before the sorghum grains will be used for human food.

If to the cultivated grains, hays, and grasses we add the wild grasses, almost endless in variety and producing at least twenty millions of dollars a year, we get a total production whose value is nearly 200 millions a year. Owing to the fact that the live stock gather the uncultivated native grasses themselves with but little human labor to aid them, the cash value of the wild grasses is not nearly as great as that of an equal amount of stock feed raised by the sweat of man's brow. The wild grasses are therefore far more important, in fact, than they seem to be when compared with the other crops in terms of dollars.

The mention of sorghum reminds one of sorghum molasses, which in turn reminds one of sugar cane and syrup and sugar. So saccharine a combination ought to be produced in large quantities, but such is not the case. Less than 100,000 acres of sorghum cane are planted, and only about 500,000 gallons of molasses are made from that portion of the cane which is not eaten by sweet-toothed children or fed to stock. Moreover, the amount of sugar cane planted is very variable. It has been estimated that 600,000 acres in Texas are peculiarly fitted for sugar cane, an area twice as large as all the cane fields of Louisiana. This area lies nearly altogether in the lower valleys of the Brazos, the Colorado, and the Rio Grande. Most of the sugar cane has so far been raised along the Colorado and Brazos by convict labor on the large state and privately owned plantations. The abolition of convict labor, the early frost of 1912, and tariff tinkering have greatly dis-

turbed and reduced the production of sugar, which is now less than half of the 15,000 tons that it was once. The Rio Grande Valley, with irrigation, has proved itself a wonderful sugar-cane region, but the future of sugar production in that region is as yet somewhat uncertain. From thirty to forty tons of cane may be raised per acre and four crops may be made from the same stubble, both figures being far in excess of the corresponding ones for Louisiana. These remarkable results led to a sugar-cane boom, which has collapsed, sugar cane giving place to crops of less value but surer yield. It will certainly be a sweet by-and-by when Texas increases her present paltry production of sugar and syrup until it provides all the "lick" and "sweetening" that is good for Texas stomachs and leaves enough sorghum and cane stalks for the children to chew.

The use of fertilizers has been almost unknown in Texas, and the fertile soils, almost but not quite inexhaustible, are, in very old fields, beginning to show signs of failure. Consequently fertilizers are coming more and more into use, another sign that the primitive agriculture of frontier days is giving way to that which knows about the chemistry of soils, nitrogen-fixing bacteria, and all the other paraphernalia of the "book farmer."

"Would you make the old farm fatter
Stuff it with organic matter."

It makes no difference when the hard-headed conservative objects to new things in farming; he can't keep botany and chemistry out of Texas, in fact, he can't keep them out of himself. So now there is a law governing commercial



Photograph by Wheeler, San Benito
CABBAGE IN THE RIO GRANDE VALLEY IN MARCH



Courtesy of Chester T. Crowell and Farm and Ranch
GATHERING LETTUCE NEAR SAN BENITO



TWENTY-EIGHT HALBERT PECANS IN THREE CLUSTERS GROWN ON BUDS THREE
YEARS OLD

Grown by F. T. Ramsey and Son, Austin

fertilizers and their prices; there is also an increasing use of stock manures and an increasing production of such nitrogen-producing legumes as cowpeas, peanuts, soy beans, alfalfa, and bur-clover. The Industrial Congress has made cowpeas one of its prize-winning crops, the average production per acre of the numerous contestants being 3.75, 2.84, and 3.79 tons in three successive years. The record is 36.48 tons of hay and peas grown on two and one-half acres by C. A. Doss of Rockdale, who made a net profit of \$905 on ten acres planted in cowpeas, corn, cotton, and milo maize. Peanuts also, in the contests, average nearly three tons to the acre; Miss Emma Stokes of Henderson holds what is thought to be a world's championship. She grew 4,256 pounds of peanut hay and 232 bushels of peanuts, a total of 11,294 pounds, on one acre. Moral:

"Do not let the ground lie bare;
Keep some green crop growing there."

What an appetite has Texas! Her sweet potato crop she entirely consumes at the rate of more than a thousand bushels a day. Irish potatoes disappear three times as fast, three-fourths of them being imported. Down the capacious throat of Texas there also goes daily more than two thousand bushels of peas and three thousand bushels of beans, mingled with 400,000 pounds of tea and coffee sweetened with a million pounds of sugar. Add \$100,000 a day for fruit and vegetables, \$10,000 for nuts, and the Texas board bill in all its magnificence will begin to dawn upon you. From soup to nuts costs something when more than four million people are eating.

The total amount of fruit and vegetables raised in Texas is difficult to ascertain, but is said to be in the neighborhood of \$40,000,000 a year, although scarcely half the farms report appreciable quantities either of vegetables or fruits. Of course, immense quantities are eaten on the farm or locally and escape all statistical record. This \$40,000,000 is a gross underestimate. Any one that knows anything, knows that the average Texan eats much more than any \$10 worth of fruits and vegetables in a year; he often eats that much in a month. What gets counted is what is shipped—70,000 carloads in 1915 according to John S. Kerr of Sherman, only a small fraction of the whole. Early onions are shipped from Laredo and Brownsville by carloads that are counted in thousands. Says Joe K. Taylor of the *Dallas News*: “The Laredo onion is a food as well as a relish. People can live on Laredo onions and remain popular.” In similar quantities cabbages and tomatoes go out of the southwest coast country in very early spring. In 1912, 700 cars of cabbages were produced near Harlingen on 2,500 acres. From six to eight tons per acre, at \$35 per ton, is profitable. In 1914, however, there was overproduction and loss. A little later thousands of carloads of tomatoes and peaches depart from Jacksonville, Tyler, and other towns located in the western part of the Forested Area. Almost everywhere all sorts of vegetables are produced in an abundance limited only by the size of the gardens and the skill or industry of the cultivators. Millions of melons and cantaloupes grow everywhere luxuriantly, needing only a little water through the summer to keep the vines bearing continuously. They appear in huge

piles at picnics and camp-meetings, and are hawked about every town. More than a hundred thousand in a year have been shipped out of Brenham and Hempstead. Parker County claims to produce the banner watermelons. Cucumbers, radishes, beets, squash, peppers, mustard, egg plants, okra, and a multitude of other garden stuff are widely raised in commercial quantities. In descending order of importance peaches, pecans, strawberries, apples, dewberries and blackberries, pears, figs, grapes, and plums are produced in amounts that range in value from a million dollars in the case of peaches down to a hundred thousand dollars in the case of plums. The Swinden pecan grove at Brownswood is said to be the first ever planted in the world for commercial purposes. Now H. A. Halbert is topping this grove to graft the pecan named after him upon the trees. San Saba County, home of E. E. Risien, the pecan "wizard," produces more pecans than any of the states except three. The invention by William Gebhardt of San Antonio of nut-cracking machinery that rapidly removes the whole kernels from the shell has boomed the pecan industry and made the G. A. Duerler Manufacturing Company the largest rehandlers of pecans in the world.

A few carloads of hickory nuts are shipped each year from Tyler. The Bermuda onion was first introduced at Cotulla in 1898 by T. C. Nye. In a few years Texas oversupplied the market. The rural Italians are raising garlic. The main trouble with the extensive cabbage industry is overproduction, defective marketing conditions, and northern cold storage competition. The Magnolia fig is so prolific

that Mr. R. H. Bushway says: "In September I have counted thirty-two figs on a tree grown from a cutting planted in March." In addition to all these abundant vegetables and fruits there is a sprinkling of oranges, raspberries, walnuts, apricots, Japanese persimmons, almonds, grapefruit, quinces, mulberries, currants, lemons, guavas, pawpaws, and avocado pears.

Mention should be made of T. V. Munson of Denison, decorated by the French Government because of his hybridizing work with the Muscadine grape. Dying in 1913, possessed of a wonderful vineyard, he had written two excellent books on grapes. F. T. Ramsey of Austin has grown an astonishing variety of plants in quantities that in a few cases make world records.

The growing of citrus fruit in Texas is full of interesting possibilities and dangers. Scattered over the coast country are a number of orange trees which have grown from seeds planted as long as sixty-five years ago. Although these early planted trees were pretty systematically neglected, they have lived for many years and borne much fruit. Near Beaumont, on the old McFaddin place, are orange trees planted more than sixty-five years ago, which are now mainly clumps of sprouts, but which are still bearing some fruit. In Brazoria, on the Bryan place, are some trees also sixty years old which have been frozen down three or four times, but which bear again within three or four years after freezing. The record-breaking freeze of 1899 failed to destroy most of the older trees, and since that time there has been much planting of the various citrus fruits. The November freeze of 1911 has checked development. It was the Elberta

peach situation over again. Many persons without any technical knowledge of or peculiar fitness for their new work had gone into the fruit-raising business expecting to make a lot of money. Failure resulted, because such persons are not able to conquer the difficulties that are inevitably encountered. Ignorance is no more of an advantage in farming than elsewhere. What seems to be true, according to Prof. H. H. Hume, is this: careful cultivation leading to very dormant trees in winter time, combined with firepots during the worst northers, will make Texas a great citrus state. It will take money, it will take brains, it will bring a rich reward, it is sure to come. Not everywhere in south Texas will citrus fruits be found, because there are unsuitable soils, but, grafted on "trifoliata" or some other freeze-resistant stock, will be so many Mandarin and Satsuma and Tangerine and Dugat oranges, so many Pomelos and Kumquats, perhaps even so many lemons and dates and olives, that in talking of such fruits in 1950 we'll refer to Texas first and then to California. The possibilities are beyond question; all that is needed is an economical means of circumventing the most extreme northers. Mr. Gilbert Onderdonk of Victoria, a veteran in fruit growing, thinks that four crops in five years will be the average. Oranges freeze both in California and Florida, yet have made "big money," as a rural Texan once said when he bought for 8 cents by mail what he could have gotten at the home store for 10 cents. Read Gilbert Onderdonk's "Pomological Possibilities of Texas" and be convinced; profit by the experience of E. S. Stockwell of Alvin, pioneer orange man.

"Texas products, various in kinds, vast in amounts, and

voluminous in size," cries the editor when some friendly subscriber deposits in his sanctum an 8-pound sweet potato, a 115-pound watermelon, a radish 34 inches long, a beet 44 inches around, or a peach that won't go into a quart cup. Very large fruits and vegetables are often produced in Texas, sometimes in abundant amounts, but it is difficult to get the exact sizes and weights of those that "beat the record."

No wonder that the slogans "Raise It in Texas," "Make It in Texas," lead on logically to the inviting cry of "Come to Texas," where opportunity lurks in every valley and prosperity is but slightly hidden behind every hill. The intensive farming that the future is sure to bring will inevitably advance horticulture even more than agriculture. Then the Lord only knows what is going to happen to a lot of Texans that already have more to eat than is good for them. Mild winters and early springs make Texas a great place for the shipping of "early stuff" to the market. Later in the season, when fruits and vegetables are cheaper, the Texan can live all the rest of the summer upon what is left. A trifling thousand or two trainloads sent out in the spring will never be missed. Put that in your pipe and smoke it with Texas-grown tobacco that sometimes brings its grower a gross income of \$150 per acre.

Says H. W. Newby of San Antonio: "Unless our real estate men are the biggest liars this side of perdition, Heaven is no better place for producing angels than Texas is for raising fruits and vegetables." Heaven takes pretty good care of angels, but Texas doesn't yet preserve much of her products in cans or silos. Raising things in Texas with

entire success demands industry, ability, and agricultural knowledge. It is only now and then that the soil and climate are generous enough to allow some lazy and foolish fellow to break a crop record. Folly reaps about the same reward in Texas that it does anywhere else.

CHAPTER V

TEXAS CATTLE IN FREE-GRASS DAYS

"I remember back in the seventies, full many summers past,
There was grass and water plenty, but it was too good to last';
And the cowboy riz up sadly and mounted his cayuse
Saying, 'The time has come when longhorns and their cowboys ain't no use!
They answered well their purpose but their glory must fade and go,
Because men say there's better things in the modern cattle show!'"

—"The Last Longhorn."

EVEN as Abraham with his flocks and herds came into the fair land of Canaan which had been given them, so came the pioneer cowman of frontier days into the broad free prairies of Texas where landowners were unknown and where the abundant grasses cured on the stem and furnished ample and nutritious food for stock all the year round. The story of the cow business in Texas is shot full with human interest. Men revealed themselves under the broadening influences of the boundless plains. The story exhibits with remarkable clearness the economic interactions of man and Nature. The great effect that a single invention may have on an industry is shown by the almost total change that the coming of barb wire produced in the cattle business. The dates in the story vary slightly from locality to locality, from state to state, but the essentials are everywhere nearly the same. Nowhere is there a better basis for the story than in Texas, which has been and is the leading state in the production of cattle. Parts of the story have been told over and over again, parts have



Courtesy of Farm and Ranch

FIG TREE OF H. G. STILWELL AT SAN BENITO

Planted in January and photographed the following October



CHINESE JUJUBES FROM THE ORCHARD OF F. T. RAMSEY AND SONS, AUSTIN
 Who state that they grow admirably in the Texas climate and are therefore destined to become a staple fruit



Photograph by Wheelus

GRAPEFRUIT IN THE RIO GRANDE VALLEY

scarcely been told at all. Exaggerations and omissions have played havoc with truth, and few there be who can recall free-grass days as they really were.

The story of cattle begins with "free grass," open country, and bony Longhorns; it ends to-day with cottonseed cake, wire fences, black muleys, and bald-faced Herefords. Before the white man came large herds of buffaloes ranged almost undisturbed over all the prairie regions of Texas. Grass was abundant nearly everywhere. Frequent prairie fires kept down the growth of cactus, mesquite, chaparral, and shinnery. The grasses, according to the old timers, were astonishingly thick and tall, and there is abundant evidence that they held the rain water closely enough to prevent much erosion of grass lands. Most of the land had already been laid off by surveyors whose lines and corners were uncertain because it is difficult to sight correctly through a compass with one eye and to look for Indians with the other. Some land had been given to various individuals for various reasons, some had been given as subsidies to the railroads, some had been held by the state for the benefit of the schools. The legal title to the land rested almost entirely in the hands of absentee owners.

Before the advancing white man, the Indian, the buffalo, and the mustang promptly disappeared. Evidently not the fittest to survive, these aborigines were soon practically exterminated, giving place to white men, cattle, horses, and sheep. Virtually the pioneer cattleman had spread before him an unoccupied and apparently limitless sea of grass, sufficient to feed millions of cows. The interval that lasted from the fading away of the Indian to the coming of the

legal owners of the land was the golden age of the old-time cowman. It was an all-too-brief age of more grass than cattle, an age when every man enjoyed a prospective fortune, an Elizabethan age, therefore, in which the usual limitations of mankind seemed to be removed. The repressive lid that usually holds down the buoyant spirits of men was off.

In the almost total absence of landowners there was much talk of grass and water rights, of ranges belonging to this or that ranch. It was very easy to forget the distant and silent legal owners of the range and to drop into the habit of regarding the prairie upon which one lived as one's own. Custom, as a matter of fact, built up an unwritten law regarding range rights, and, as the cowmen increased in numbers, there were not as many conflicts as might have been expected. There was a live and let live spirit that greatly reduced the ill-feeling, bluffs, threats, and fights that occasionally occurred when a newcomer crowded in on an already occupied range. Fights and ill-feeling were much more common between cowmen and sheepmen than between cowmen and cowmen. In certain places, for brief times, the collective struggle between cowmen and sheepmen attained the proportions of small wars. Many murders were committed, nerves were tested in fair fights, the blow-hard was often put both to proof and to flight. It was a time for brave men and not for weaklings, conditions were slightly feral, there was not even a "scrap of paper" to protect imagined rights. There would have been many fights for cattle ranges had it not been for two facts: at first there was more than enough grass for all, at the end it was hopeless to stem the invading swarm.

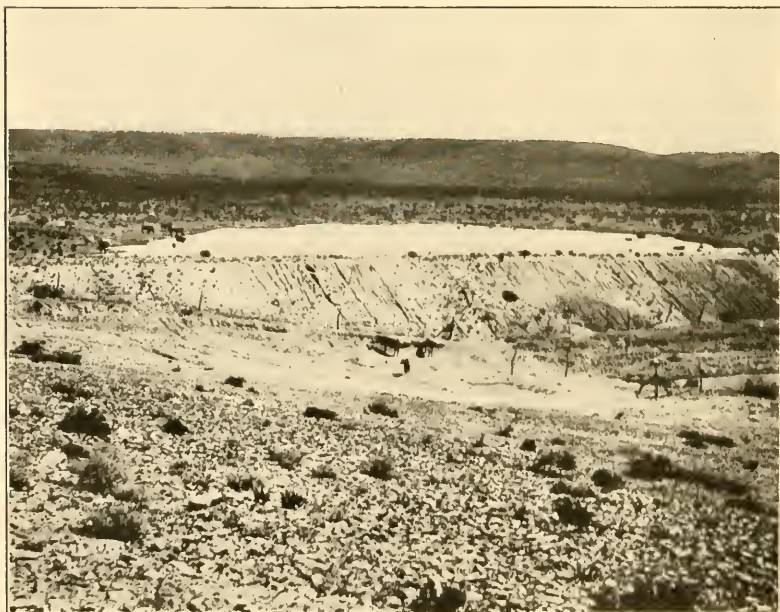


Photograph of a picture exhibited by W. R. Leigh at the Panama-Pacific Exposition
"AND WOE TO THE RIDER, AND WOE TO THE STEED,
WHO FALLS IN FRONT OF THE MAD STAMPEDE."



Courtesy of the Dallas News

A FEW SURVIVING LONGHORNS PHOTOGRAPHED BY HARTING, BROWNWOOD
Note the rough hair which is shed as spring advances



Courtesy of the Bureau of Economic Geology

WATER TANK AND CATTLE
A typical Texas scene

In the palmy days of abundant free grass each pioneer stockman thought that he had struck it rich and had no trouble at all in proving it on paper. His theory of one-fourth calves and one-twelfth steers was not so very far wrong, granted grass enough. A bunch of twelve hundred ordinary stock cattle will produce three hundred calves and one hundred steers in a year. The sale of steers will yield an easy income, and the excess of calves over steers will produce a net increase of one-sixth of the bunch. Any one who has figured compound interest at rates of from 15 to 20 per cent. knows that such a rate of increase will double the principal in four or five years, and quadruple it in eight or ten years. No wonder that every free-grass cowman could think that he would "soon be heeled." Almost every one of the owners of many cattle is able to look back on his past and say that a few heifers and an uncrowded country "made him." Moreover, for a time things went in fact as they did in theory, and the number of cattle in Texas more than doubled between 1875 and 1885. The number nearly doubled between 1880 and 1890 in spite of big "dies" due to hard winters and starvation. During these years cattlemen borrowed at very excessive rates of interest and yet made money. What a pity it was that a Malthusian serpent lurked in the beautiful Eden, the same old serpent that is going to wreck some too lovely schemes of social reform.

Men of the free-grass days have usually found it hard to accustom themselves wholly to the more prosaic procedure of to-day, when there are in all Texas only a few dozen free-grass ranches left. The type of Western cowman was

developed to perfection in those days. Outlaws and desperados were there in great variety and some quantity, but were greatly outnumbered by the honorable and brave men who, when they went after a bad man, did so quietly, unostentatiously, and effectively. A murderer or a horse thief was often very conscientiously strung up on the nearest limb after a very informal trial that frequently had more real justice about it than our present prolonged court-house doin's manipulated by slick lawyers. The capturing and hanging of an armed desperado by a few brave men is quite a different affair from the lynching of an unarmed negro by a mob. The ordinary cowman's sense of justice and fairplay was excellent; he was a real democrat who measured a man by his intrinsic qualities rather than by more or less accidental accessories such as wealth or education. Treachery he despised and generosity he admired. Mr. Roosevelt has pointed out that the days of free grass were essentially similar to the days of medieval England, Jesse James taking the place of Robin Hood. The songs of the cowboys correspond to the ballads of the Scottish Border, and the roping and riding contests of to-day are the lineal descendants of courtly tournaments. The Knights of King Arthur's Round Table and the Texas broncho busters have been poured from the same mould.

There was romance, but there was also routine. The free-grass cattle business of necessity gave rise to an interesting system of coöperation about which but little has been printed. In the absence of fences the cattle of different owners naturally intermingled a great deal. Moreover, the winter northers caused the cattle to drift south in large

numbers for many miles. In the smooth open country the drift was greater of course than in the breaks of the hilly and timbered country. As a consequence, the cattle of various owners were almost inextricably mixed, and those of a single owner were scattered often over hundreds of square miles. Hence arose the necessity of branding cattle with marks of ownership and of working the range in concert with other cowmen.

In the spring, as soon as the new grass had strengthened both the cattle and the cow ponies, each ranch, in rude proportion to the number of its cattle, sent out one or more outfits to work the range. The nucleus of each outfit consisted of a "chuck wagon," a team to pull it, and a cook. The wagon was covered with a "sheet," the front part of the bed was full of provisions, the hind part was filled with the hospitable mess box whose lid formed a table upon which the supposedly cranky cook regularly worked and upon which the boys occasionally shot dice. On top of the provisions the bedclothes and other small equipment of the cowboys were usually thrown.

"It's cloudy in the west and a-looking like rain,
And my damned old slicker's in the wagon again."

There were usually from five to thirty men with a wagon, and each man had from four to ten horses.

"Half-past four! the noisy cook will roar,
Hurrah, boys! She's breakin' day!
Slowly then we rise and wipe our sleepy eyes;
The sweet dreamy night has passed away."

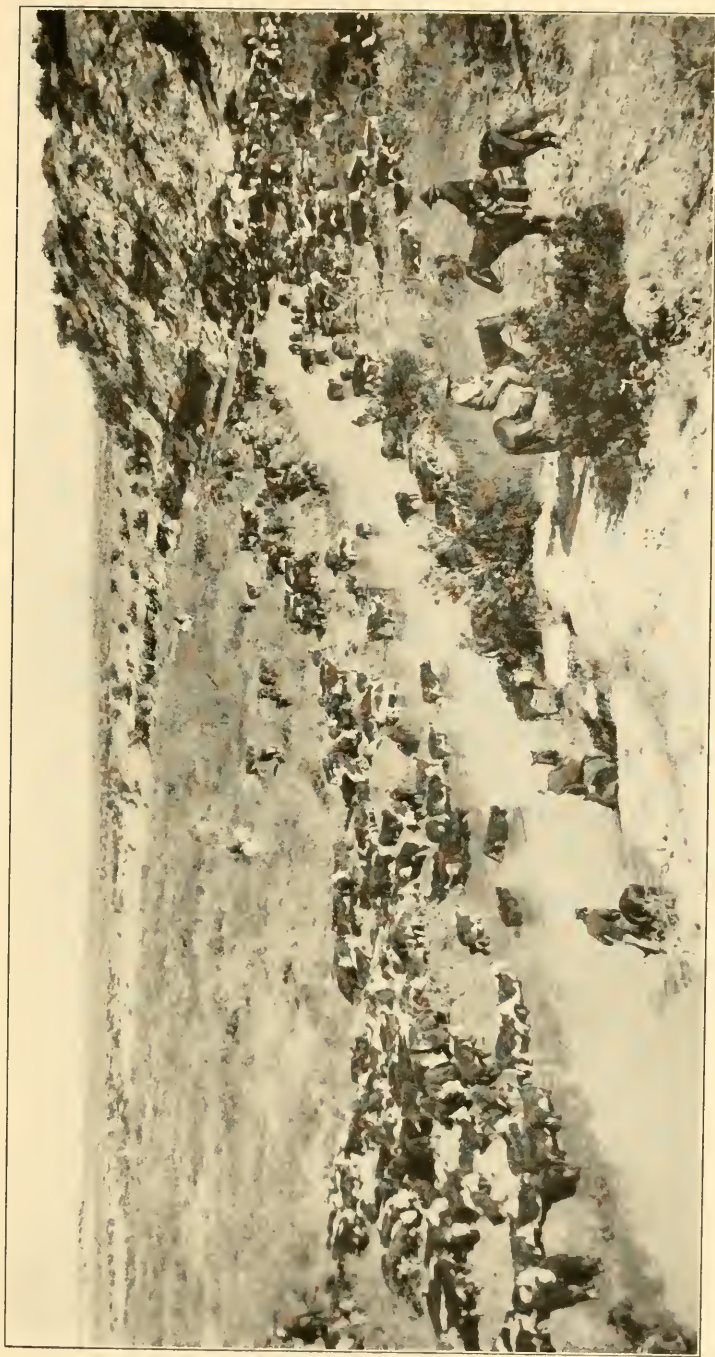
The third line of this quotation is more poetic than truthful, for, sleeping mostly in his day clothes, a few minutes suf-

ficed for a cow puncher to dress, to wash his face when there was water enough, to catch and saddle his horse, to eat breakfast, and to get on the drive. Particularly in cold weather it was not common to "peel off" many clothes when going to bed in camp. Hence sometimes he was

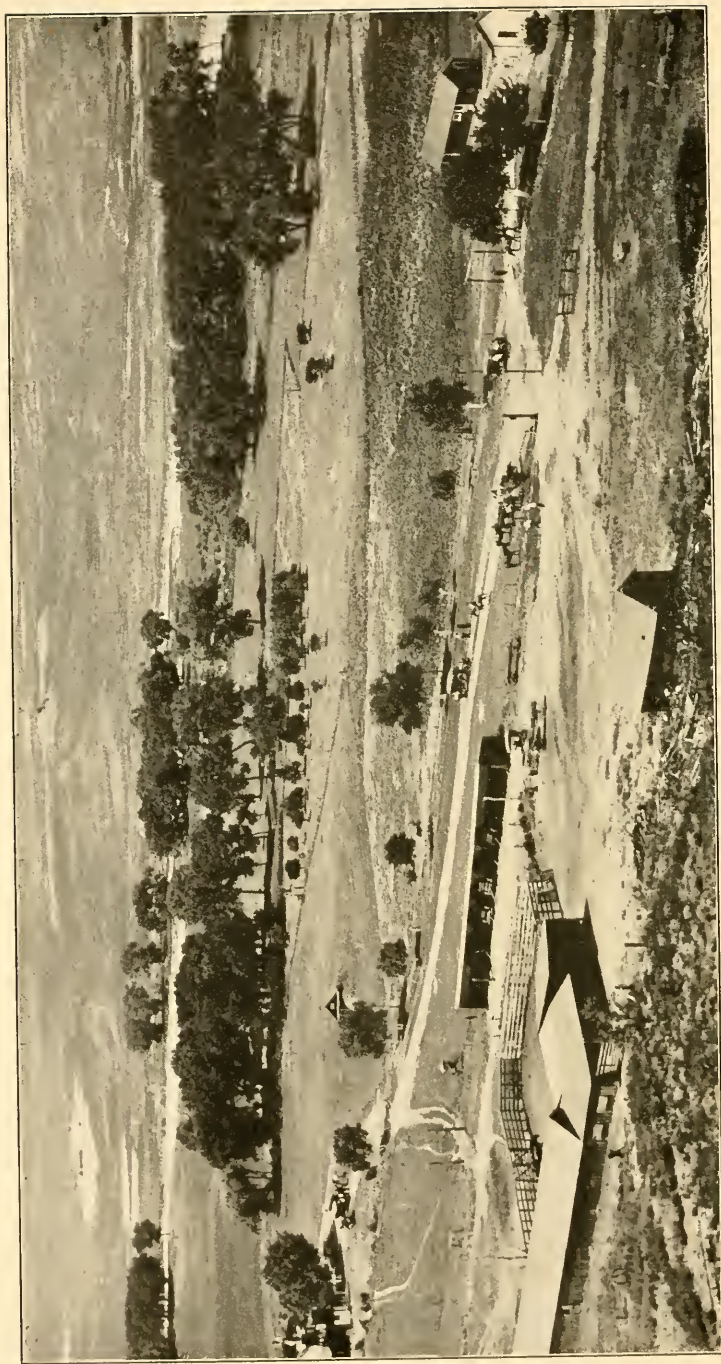
"With Stetson hat and jingling spurs and leather up to knees.
Grey-backs as big as chili beans and fighting like hell with fleas."

Breakfast quickly eaten, the cook moved his wagon to the next camping place, the horses of the outfit and the cattle already collected were drifted slowly in the same direction, while most of the cowboys beat the country for more cattle, riding rapidly but systematically, yodelling and sometimes firing six-shooters into the air to start the range cattle forward. In general, more noise was made in brushy country than in open, as it is easier to scare a yearling out of a thicket by yelling than to ride in looking for it. The tendency of all cattle to start when a few begin to move was a great help.

In general, range cattle bunched up and began to trot off as they heard or saw the approaching cowboys. "One of the prettiest sights I ever saw," writes an old Texas cowman, "was a cool September morning drive when a bunch of wild cattle led by three or four big old 'moss backs' raised their heads as they saw us coming and made a dash for liberty across the divide to the sheltering cañon. When he sees the rising sun flashing on their horns as they 'break to run' your real cow pony will straighten out his neck, grab the bit in his teeth, and 'light out' after them. If you are not a cripple or a paralytic you'll ride as you never rode before."



HEREFORD CATTLE AND COWBOYS TAKING IT EASY AT A WATER HOLE IN THE PANHANDLE
With slight variations this scene is duplicated many times each day in Texas



A MODERN RANCH WITH COMFORTABLE HOUSES AND BARNES NOT FAR FROM FORT WORTH

Ten horses to a man was not unusual, as the horses had to live on grass only. In such a case two were used for night herding, and each of the remaining eight was ridden on the drive for a fourth of a day, every other day. Pete, Dick, Paint, Spanish, Blue, Hellfire, Bean-belly, and Baldy were frequent names for cowboys' ponies. A considerable herd of horses, watched by a horse "rustler," or "wrangler," consequently accompanied each wagon. This rustler was often a boy, and the cowboys often boys themselves,

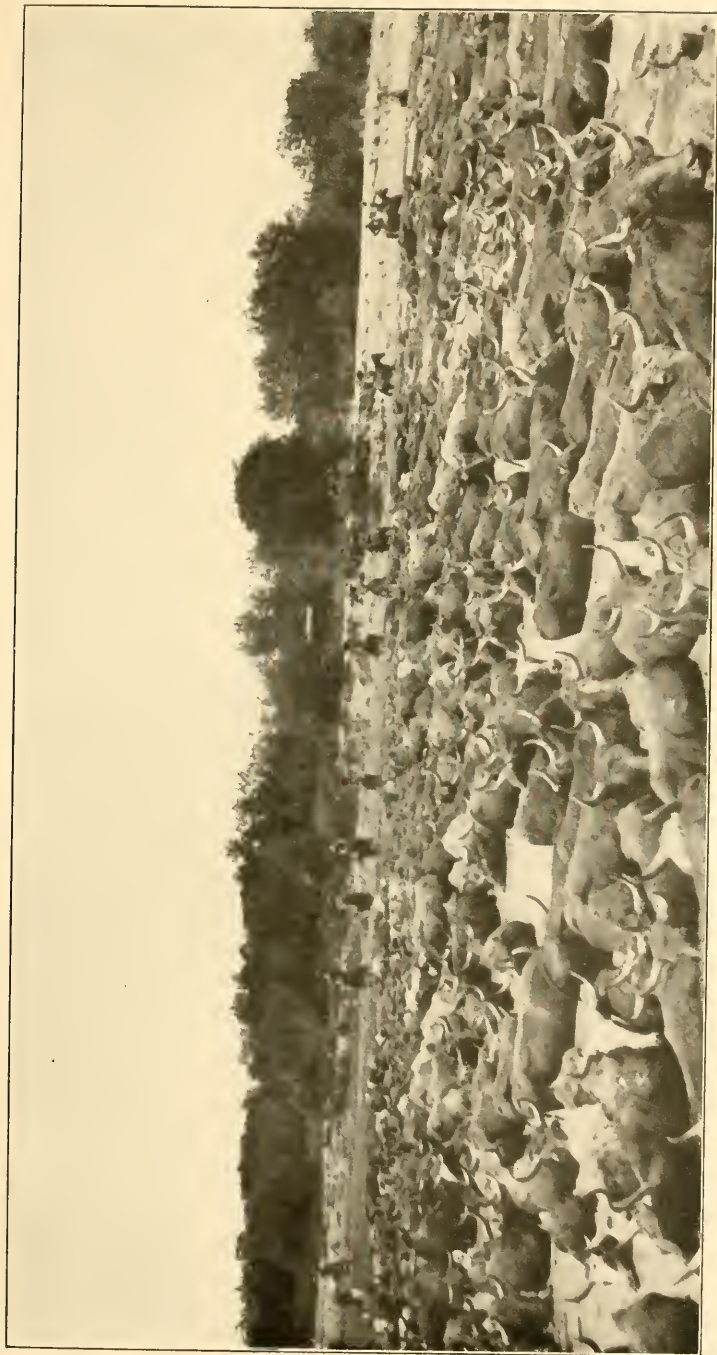
"Learned him to wrangle horses and to try to know them all,
And to get them in at daylight if he could."

Often, however, the boy rustler got a lot of undeserved cussin' when one horse hurt another or a hobble skinned the forelegs of some favorite pony.

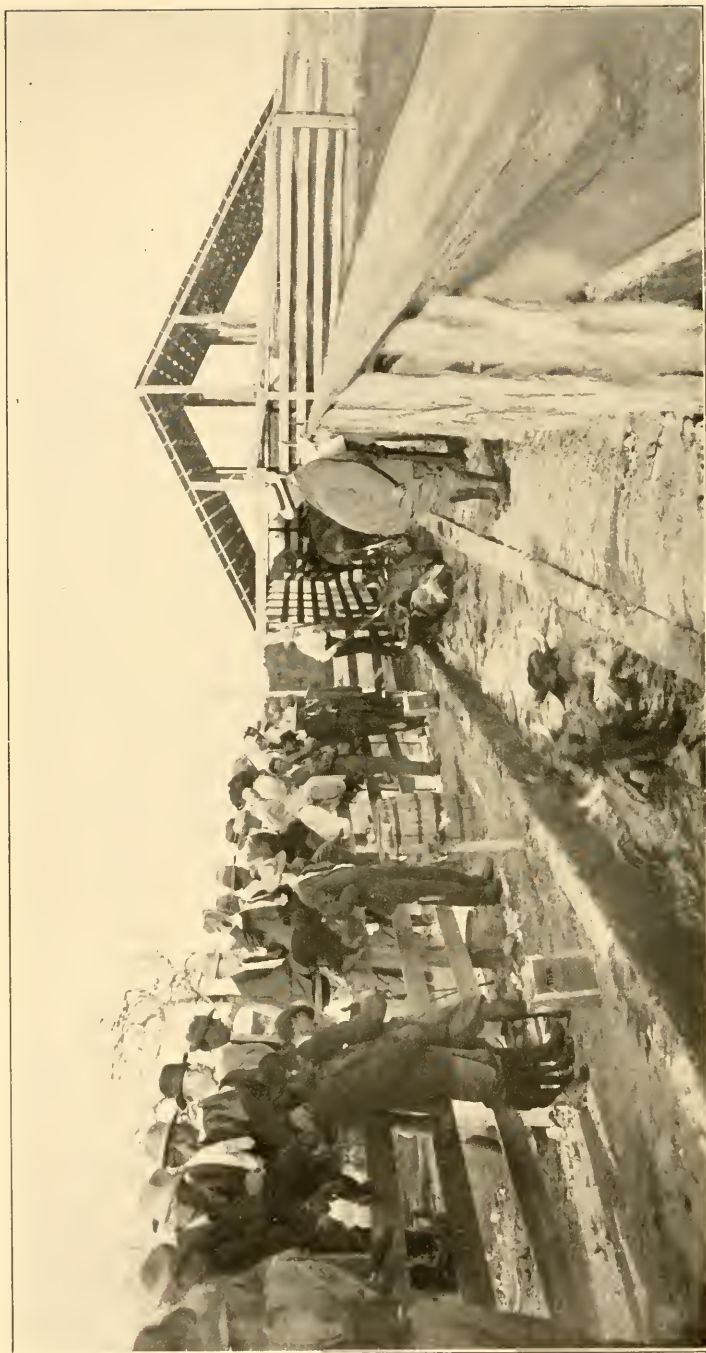
A boss accompanied each wagon. He was sometimes the owner of the outfit. Except where negroes or Mexicans were involved, an almost perfect democracy prevailed between the boss, the cowboys, and the cook. Racial antagonisms were strong but not unkindly. Great were the talks around the campfires at night. Sometimes a "feller from the East" would tell of crowded cities, sometimes a cheerful song like "The Dying Cowboy" would be sung, sometimes a night herder singing would stampede a bunch of too appreciative cattle. Once a camp was divided for days on what was a veritable bone of contention—namely, the position of the real knee of a horse. Upon another occasion a camp fell into violent disagreement over the subjection of evolution artfully and mirthfully suggested to it in the form of an equation: a pig has the same number of bones as a man.

Men who owned only small bunches of cattle usually went with the wagons of the larger ranches. Everybody helped in handling the cattle of everybody else. The larger ranches hired cowboys to help work the range. Everybody carried a "brand book" which gave the home, location, owners, and brands of the cattle. A cow was often passed from round-up to round-up back to her owner's ranch without the owner ever seeing her until she got home, and sometimes not then, home meaning anywhere within twenty miles of the ranch house when there happened to be a house. The whole scheme resembled the distribution of mail: the cowboys were the mail clerks, the cattle were the pieces of mail, the brands were the addresses on the pieces.

A certain area having been thoroughly searched, all the cattle on it were crowded together at the round-up ground, which then presented a scene of great activity. Hundreds (not thousands, as sometimes stated) of bellowing cattle surrounded by two or three dozen cowboys lost in an immense cloud of dust were the most prominent elements. The dust could be seen for miles, a great deal of it getting into the nostrils of the thirsty cow punchers. The cattle being rounded up, the process of "cutting out" began, a process analogous to throwing the mail in various bags for various towns. The herd having been subdivided into two or three subsidiary herds, these were driven in directions that would bring the cattle closer to their respective ranches. Before the days of pens to hold the cattle, the roping and branding of calves and the "cutting out" took place on the open prairie. A number of men were then needed to keep the cattle from scattering.



MEXICAN CATTLE FORDING THE RIO GRANDE AS THEY ARE BEING DRIVEN INTO TEXAS
Sometimes a herd crossing in this way produces an appreciable damming of a river



Copyright, 1910, by Wm. Cooper & Nephews

CATTLE SWIMMING THROUGH A DIPPING VAT

Filled with a liquid disinfectant into which they have been forced in order to remove the fever ticks upon them

Before the days of pens, holding a herd together required constant work by day and by night. Storms increased the difficulties and lightning the danger, it being a favorite trick for lightning to strike around the edge of the herd where the cowboys were, rather than in the herd. Holding a herd at night on the bare prairie without shelter and watching a tropical storm approach is no job for a molly-coddle. The roar of the approaching wind, the increasing claps of thunder, the more and more vivid flashes of lightning, the electric glow on the horns of the cattle, conspired to make a cowboy yearn for a dry bed at home.

Roping and riding were the arts of all arts, and above his saddle, his boots, his hat, or his spurs, the cowboy valued his "roping" and "cutting" horse. (This is said in spite of the frequent truth of the song about the "forty-dollar saddle and the ten-dollar horse.") Marvellous indeed was the way in which a six-hundred-pound horse could "hold" and "throw" a twelve-hundred-pound steer. It was a case of brains versus brawn. Almost equally wonderful was the pursuit by the "cutting horse" of a particular steer or cow until the latter was driven panting from the herd. As soon as the desired animal was made known to the horse, no dodging on its part was of any avail, the horse quickly "worming" it out of the herd. Few greenhorns could stay on these quick-dodging horses.

Although the testimony of such witnesses may be subject to some suspicion, all old Texas cow punchers who return from South America report that the astonishing stories we have all read about the Gauchos of Argentine and their skill with the lasso and bola are exaggerations, the South

Americans not surpassing or even equalling the ropers and riders of our wild and woolly West. Roping, of course, was a favorite theme of the cowboy poet:

“He could catch a maverick by the horns or heel him on the fly,
He could pick up both of his front ones whenever he chose to try.”

At the frequent roping and riding contests a big steer has often been caught, thrown, and hog tied in less than a minute. The world's record is held by Clay McGonagill, a Texas man who, in strict accord with the rules, hog tied a steer at Douglas, Arizona, in $21\frac{1}{2}$ seconds.

Before the effeminate days of the branding chute, the routine of branding involved catching the animal fore and aft by two mounted ropers, who so stretched out the captured bovine that a third man on foot could easily tail it over on its side for a fourth man to stick the hot branding irons to its quivering skin. It was, of course, possible for two men alone to brand, especially if they had horses that were trained to stand and hold tight the ropes attached to the pommels of the saddles while their riders tailed and branded. The aristocrats were the ropers and bronco busters; the plebeians could only tail and brand for them. Hence social complications arose when, as sometimes happened, a negro acquired great skill at roping and riding. The negro, however, got his due praise even if couched in apparently grudging language such as “That damned nigger can sure ride.”

There was a fall as well as a spring working, its chief object being to brand summer calves and the spring calves overlooked in the earlier round-ups. If a calf was not branded

before it quit following its mammy it became a "maverick" and was likely to acquire an owner other than the owner of its mother. Overlooked calves the following winter became almost legitimate objects of acquisition, and watchfulness through the winter has increased the calf crop of some far beyond the number of their cows. Of course a calf could be separated from its mother and branded differently, but this was plain stealing, not mere mavericking. The ethics turned on whether the mother was or was not known to the man who put his brand on the calf of another man's cow. Many a man has been temporarily and even permanently incommoded or led to depart suddenly for unknown regions by a calf with his brand on it inexplicably insisting on following a cow of another brand. "Your calves don't suck the right cows," were the words once used by a courageous frontier preacher in rebuking his cattle-stealing congregation.

The origin of the various cattle associations was chiefly due to the need of checking the stealing of cattle. The stealing and eating of individual animals on the range was hard to stop, but the stealing and shipping away for sale of whole bunches was rather early ended by locating brand inspectors at shipping points. There, nowadays, representatives of the United States Bureau of Animal Industry also often inspect for Texas fever and other diseases. When cattle often ranged a hundred miles from home their owner needed some sort of an association to protect his interests. The present great Texas Cattle Raisers' Association started in Graham in 1877 as a small west Texas affair whose prime purpose was to catch cattle thieves. During its existence

its inspectors have turned back nearly eighty thousand head of stolen cattle and have prevented the stealing of hundreds of thousands of others.

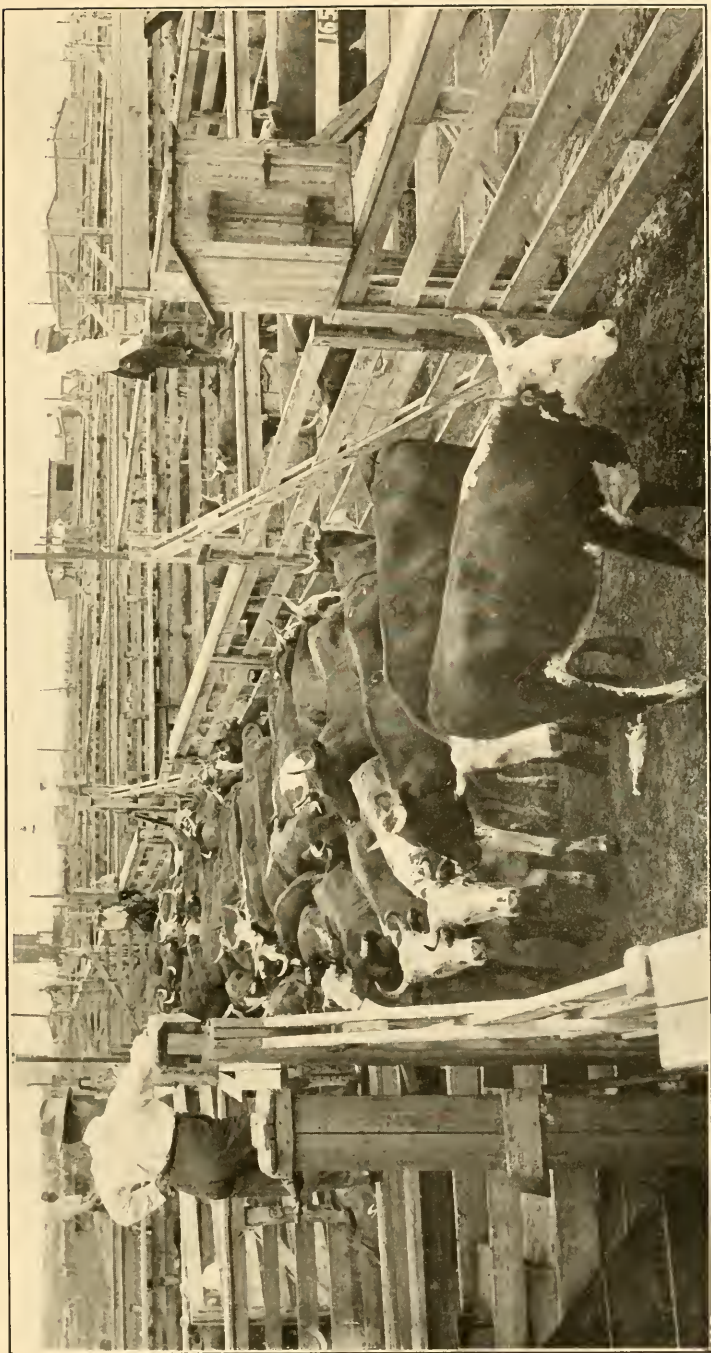
In old days, as at present, the branding of calves and of other cattle, the watching for screw worms and fever ticks, the salting of cattle, the killing of coyotes and wolves, formed a part of the routine. "Going up the trail," however, has passed away. Due originally to the fact that the southern ranges were best for cows and calves, the northern for steers, it was and still is the practice to take young cattle from Texas to finish them for market in the north. This is now done by train and not by trail, and is not done as much as formerly. Grazing slowly as they went, it took nine months for a herd to make its way from Texas to Montana. Men are still alive who have driven cattle from Texas right into Chicago "on the hoof."

"Whoopee ti yi, get along little dogies,
For you know that Wyoming will be your new home."

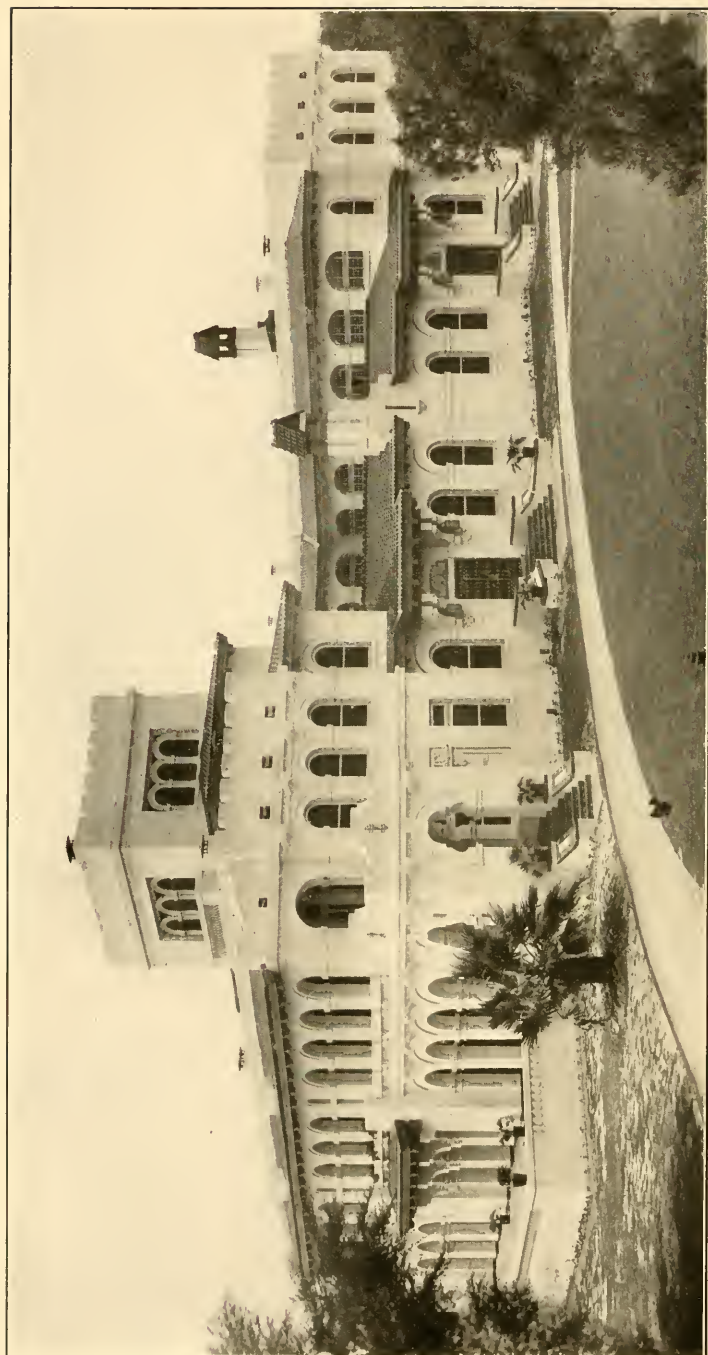
Going up the trail began after the Civil War and in one form or another lasted for many years. A few bunches went up the trail in the late sixties; in 1870 over half a million head were driven out of Texas. Strangely enough, an old "Trail Men's Association" was not formed till 1915. You must "have been one uv 'em" to belong to it.

"I woke up one morning on the old Chisholm trail,
A rope in my hand and a cow by the tail."

There was romance about it, storms and stampedes, hard work, and no shelter. Additional excitement was furnished



BUYERS AND SELLERS EXAMINING CATTLE AT THE FORT WORTH STOCK YARDS



SANTA GERTRUDIS, NEAR KINGSVILLE





Home of Mrs H. M. King owner of one of the largest, oldest, and most famous ranches in the United States. Adams and Adams, Architects








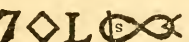
when the northern dweller along the trails, alarmed at the so-called Texas fever, met the north-bound southern herds with shotguns and rifles. But the trail took the cowboys into new scenes and bulked largely in their talks, songs, and stories. As the railroads came nearer, the trails shortened and finally almost vanished. The shipping points where the trails ended were often the scenes of cowboy orgies which have been much magnified by the pens of Easterners who write of them. There was some shooting up of towns and riding of horses into saloons, but such episodes do not give one a fair idea of the cowboy. Imagine yourself on the range, with miles of sky above and miles of grass below, and after six months of alkali in your throat and dust in your nose you'll want to drink at least a bottle of soda water when you get to town.

The domestic arrangements of the early cowman were as simple as those of the sheepman, and simpler than those of the "nester." His house was a cabin, a "box" room, or a covered hole dug down into the level ground or back into a hillside. Up through the large chimney of a hillside dugout in Stonewall County a startled pet deer once easily leaped. In the eloquent language of "Slade," who wrote many years ago of Texas life, these dugouts "towered toward China." Fashions in clothes did not change and were very definite. Clothes were washed somewhat oftener than their wearer went swimming, but often acquired a considerable amount of local color. High-heeled boots and sharp spurs were de rigueur, and, unfortunately for the horses, so were the cruel Spanish bits which often cost as much as \$25. The boots were usually hand-made and, like the hats, cost ten or

twelve dollars. The "chaps," or chaparejos, leather trousers to protect the usual trousers underneath from tearing thorns and brush, were often very expensively made. So were the saddles, ever the delight of the bronco-buster made bowlegged by much riding. Many stranded quirts and reatas, or lassos, were made of leather by skilled cowboys, the strands being often of different colors. Equally elaborate and beautiful were the mecates, or hair ropes, made of hair from the tails of mares, usually called "broom tails" in the West. Ropes of human hair were much talked about but very rarely or never seen.

Various and sundry were the brands and earmarks inflicted upon the cattle. Old cows that had been sold several times and rebranded each time often presented a highly literary appearance. A whole book could be written on brands and earmarks, a book that would be full of the inventive fancy of man. At the various county seats brands were "recorded" in brand books to avoid duplication, the same brand being often recorded by the same owner in many counties. Of course a man often took his initials for his brand and consequently was labelled "Old P S" or "Old" something else. To the ordinary numbers and letters of the alphabet were added numerous interesting symbols such as the "lazy eight" ∞ , the "lazy S" \mathcal{S} , the "Bar M" $\overline{\text{M}}$, the "half circle A" $\hat{\text{A}}$, the "block O" O , the "rafter T" $\hat{\text{T}}$, the "M bar" $\overline{\text{M}}$, and the "diamond A" \diamond . Pleasing combinations like "H bar L," H-L, were frequent, and frying pans, two-buckles, pitchforks, buck-heads, hash knives, and other insignia gave their names to large ranches. The age of heraldry reappeared in the West.

Even more curious were such brands as the  "quien sabe" of Henry Halff of Midland, the  old woman of the Dublins, the top hat  of H. C. McKay of Bandera, the coffeepot  of C. H. Noonan of Castroville. The XIT of the Capitol Syndicate, the flying W of the King Ranch, the lazy S of C. C. Slaughter, the 6666 of S. R. Burnett, the LIT and LFD of G. W. Littlefield are a few of the most famous Texas brands. The Yellowhouse, McCutcheon, Bennett, Cocanut, Spur, Matador, and other big ranches were each as big as Rhode Island, and several so remain. Altering brands was one of the methods of the cattle thief, but was never practised extensively with success. Nor has any branding "fluid" ever replaced the hot iron as a branding instrument.

No such variety in earmarks was possible as in brands. There were the swallow fork , the half crop , the crop , the under-bit , the over-bit , the under-slope , and the grub  (a suspicious affair that removed all traces of any possible previous marks). The average cowman remembered an astonishing number of brands and earmarks, rattling off such combinations as "seven-diamond L with crop the right and swallow fork the left"  with the greatest ease.

Such were free-grass days. So attractive were they that many rushed in to profit by them. Northerners, Easterners, and even Englishmen flocked into the cow business. Cattle boomed and were sold in the early eighties at the previously unheard of prices of \$20 and \$25 per head, "range delivery." Sheep also went up, from \$2 to \$5 and \$6. Enthusiasts proved to their own satisfaction that cattle were bound to

go even higher. A few wise old cowmen sold at top prices, and a few of the oldtimers and a few of the newcomers began to look into the matter of securing a real right to the land upon which the cattle must be fed.

Free grass came to an end; its death was nearly as sudden as that desired by Cæsar. By 1885 much of the country was overstocked, and the "great die" of 1886 was the natural result. Nor could the damage done by overstocking be remedied at once, since years would be required to restore the grasses, not merely exhausted but destroyed. The stock-carrying capacity of the Texas ranges was reduced and continued to be further reduced until very recent years. It will be a long time before a careful management of the natural grasses will restore them to their primitive luxuriance and usefulness.

The big die was naturally followed by other dies; droughts and hard winters seemed to come in rapid succession; the panic of 1893 brought down the price of everything; the golden age of free grass was dead. Cattle had been everything, land nothing; now land was to assume its inevitable place as the primary element in cattle production. What would have happened had it not been possible to fence the land is an interesting question. Perhaps starvation would have followed starvation, perhaps some coöperative or governmental *modus vivendi* would have been put into successful operation. The coming of the barb wire, which was cheap and required few fence posts, revolutionized and saved the cow business. It is said that John W. Gates first "demonstrated" barb wire in Texas on the Alamo Plaza in San Antonio in 1875. The cowmen who came to

laugh at the new-fangled wire fence remained until they could purchase miles of wire. Private control of land became possible and brought with it some interest in the preservation of the grasses; it was no longer a question merely of "beating the other fellow to the grass" and "getting the grass while it lasted." Even now cowmen do not take as much interest as they should in the improvement of their pastures, nor realize the value of the paradox "to graze more, we must graze less." In old days everything was entirely against conservation of the wild grasses. Now it is certain that the ranges will be at least reasonably protected.

Range cattle seem to have been most numerous about 1890. For a time the number of cattle was the result of a combat between starvation and fecundity. Deaths from slow starvation occurred mostly in March just as the new grass was coming. Usually the poor weakened animals bogged near waterholes and there died miserably. It was not legal for the mere passerby to put the poor creature out of its pain. The sight of a hundred dying cows, half side deep in cold river sand, was a pitiable one. When pulled out by a "bog-rider" the cow often died, being too weak to seek the little feed that was to be found. Even after the building of fences there was some dying, the cattle drifting to the south sides of the pastures and there perishing. The bones of the slaughtered buffaloes and starved cattle were so thickly scattered that during the hard times of the early nineties "bone pickers" gathered them from the prairies and sold them at railroad points at \$8 a ton for fertilizer.

Many men were ruined in the transition from free grass to private control. Despite the difficulty of getting fence posts, which were often hauled by oxen two hundred miles, the country was rapidly fenced. Some stockmen bought land, some leased, some fenced land to which they had no legal claim, some moved farther out. When a wire fence was built right across a prairie that a man had been regarding as his own, he naturally objected, especially if the man who was doing the fencing had no better right than he to the land being fenced. Hence arose the "fence-cutters' war," which suddenly increased to such a proportion that the legislature in special session in 1884 made it a penitentiary offense to cut a wire fence, but required that a fence should have a gate for a public road at least every three miles. The struggle was a short one, the open ranges disappeared rapidly, private control was established. The cow business entered into its present phase.

Five-sixths of Texas consisting to-day of unimproved land, the raising of live stock upon the natural grasses is still an extensive industry. Cattle are produced throughout Texas in large numbers, and their distribution over the state is astonishingly uniform and not concentrated in west Texas as much as is commonly supposed. In general, the advancing farmer has increased the price of land beyond its grazing value, but the land is there, unplowed, and must be grazed. In west Texas the cowman regards the semi-arid condition as somewhat his friend in that it keeps the farmer away from his pastures. In the rest of Texas, where farming is common, the farmer does not raise as many cattle, pigs, and other domestic animals as he should. This

is the great crying evil of Texas farming to-day and fully accounts for the poor showing made by the state in live-stock statistics. Perhaps, on the other hand, the cowman does not raise as much feed as he should. There is too great a division between farming and stock raising, but time is curing this and, let us hope, will continue to cure it until Texas approximates Iowa in farming and stock raising efficiency. Meanwhile, let us take some comfort from the fact that Texas still has as many cattle as Canada or Mexico or Italy or England and Wales or South Africa. She has half as many as Australia, one-third as many as Germany, and one-tenth as many as the whole United States. All this in spite of the fact that range cattle have pretty steadily decreased during the past twenty-five years, in which period milch cows, subject to different influences, have slowly increased. Elsewhere, as in Texas, the high prices of land, the neglect of cattle by the farmers, the excessive slaughter induced first by low prices which forced cowmen to ship their heifers in order to pay their debts, have reduced the number of cattle until a beef famine is threatened. Now tempting high prices are tending to deplete the supply of cattle. At old beef-eating rates, the United States needs fourteen million cattle a year, and is producing only twelve million. Clearly, whether we want to or not, we must soon follow the advice of those doctors who tell us to eat less meat.

If the number of cattle has decreased, their quality and their price have certainly increased. The Longhorns of Texas were probably the mongrel descendants of Spanish cattle which had wandered from old Mexico into Texas and

of American cattle brought from the older states. In the first efforts to breed up the low-grade range cattle, Durham or Shorthorn bulls were used, but the Shorthorn did not prove to be a good "rustler." Then came the bald-faced Herefords, brought first to Texas in 1877 by W. S. Ikard of Henrietta, as the successful result of many trials with various breeds. The Hereford proved to be a good rustler and so prepotent in breeding that his calves showed white faces when bred from cows of the lowest grade. Maturing at an early age, the Herefords and their hybrids thus possessed the most desirable qualities, and to-day they prevail almost exclusively on the western ranges.

Living in fenced pastures, each animal worth many dollars, cattle are now much better cared for and some of the horrors of the olden time seem to be very far away. A ton of cotton-seed cake costing less than the value of one cow will save a dozen from starvation in a hard winter. It now costs "real" money to keep a cow for a year, but she and her calf richly repay the cost. In the cactus country they singe the "stickers" from the leaves of the juicy prickly pear, thereby producing a good cattle food and getting rid of the cactus at the same time. During northers the cattle are watched carefully and prevented from drifting against the southern fences in the pastures. Dehorning prevails, and after branding, earmarking, and castration the animals are carefully watched until healed. Everything is pretty well managed and on a sound business basis. Farm conditions are invading the ranges.

Something of the old days remain, but there are important differences. The Longhorn is nearly extinct, fine specimens

of his horns selling for a thousand dollars. The Spanish pony, the bucking bronco, is becoming rarer and rarer. No cowboy now dashes to alarm and rope a peaceful white-faced Hereford. No one shoots a hole in the coffeepot because of the chicory in it.

“The Spanish bull that used to water at the seep spring at the foot of the hill no longer makes the cañon roar with the echoes of his bellowings. A dinner of calf-ribs, sour-dough bread, navy beans, and bitter coffee is still common, but the cowboy no longer carries a letter from ‘Mary’ in a pocket where he can read it every day, because he can now telephone Mary from every ranch.” Still left, but in diminished numbers, are as skilful riders and ropers as there were, but the cutting horse is occasionally to be found playing polo. Bronco-busting is not what it was, and roping cougars has gone out of fashion. The broad Stetson hat which assaulted the Mexican sombrero is now being threatened by the Fedora and the Panama. Branding is now done in small pens provided with “squeeze chutes,” and round-ups are greatly diminished. A majority of Texas boys know but little of trying to “head a calf” as it dashes down a thorny hillside or of throwing a big bull with a little pony. Here and there one still finds some splendid specimens of the old-time cowman. The noble race is not extinct nor have its campfires yet gone entirely out.

Prosaic Texas, where the milkman prevails with over a million milch cows producing annually more than two millions of gallons of milk and a hundred millions of pounds of butter! Within her borders at Falfurrias, owned by Ed Lasater, is the largest herd of Jersey milkers in the world,

and at Midland, owned by the Scharbauers, the largest herd of pure-bred Herefords. Beef cattle are now driven short distances to the railroads and sent to the Fort Worth packeries, while milk cans are a frequent feature of the landscape. "Beef barons" contemptuous of dairies are now uncommon. Yet learned Easterners minutely versed in the geography of Herzegovina still think that a Texan, when lonesome, shoulders his gun and goes out to kill a couple of Indians for amusement. In fact, the average Easterner doesn't know the difference between a jingle-bob and a jug-handle dewlap!

CHAPTER VI

FROM HORSES TO BEES

"Raise horses, mules, sheep, hogs, and cattle,
For it takes all of these to win life's battle."

—*J. C. Hestand.*

FARMING in Texas does not involve the raising of as much live stock as it should, despite the fact that the mild winters would seem to give the Southern farmer a great advantage over Northern competitors. Notwithstanding this comparative neglect which, along with other causes, has led to a general reduction in the number of domestic animals, there are still left in Texas two million horses and mules (five horses to every three mules), two million sheep, nearly a million goats, three million hogs, twenty millions of poultry, and a quarter of a million colonies of bees, in addition to six million cattle. Assuming that it requires three times as much to feed a cow or a horse or a mule as a sheep or a goat or a hog, we find that the amount necessary to feed ten million cattle is required to support all the live stock. Since the area of the state is 165,000,000 acres, there is, according to this calculation, more than sixteen acres to each cow, horse, and mule, and five acres to each hog, sheep, and goat. Making all discount for desert and other unproductive areas, but taking due account of the reasonable possibilities of the situation, it seems plain that Texas can raise from two to three times

the range live stock that she is raising now. Sixteen acres of range pasture to a cow is about the allowance in the more arid regions, no help being obtained from cultivated crops; eight or ten acres are more nearly the average. If the ranges be more carefully grazed, if in addition more feed for stock be raised on the farms, Texas could easily maintain four times as many live stock as at present.

The raising of more live stock is the most golden opportunity now being neglected throughout the entire South. Stock utilizes waste spaces, fertilizes the soil, furnishes immediate food, and when offered for sale does not give rise to such transportation or marketing difficulties as does the selling of crops. In particular, increased attention should be paid to pigs and poultry, both for home consumption and for market. Undoubtedly the coming of the silo, whose contents are for live stock what canned goods are for man, will do much ultimately to increase live-stock production. Fortunately so many have been built during the last five years that Texas has been called "the land of ten thousand silos." Singularly enough, the very high prices of meat discourage production by encouraging the sale and slaughter of cattle and hogs to such an extent that the supply is being exhausted: there is a constant temptation to sell the goose that lays the golden eggs.

The raising of high-grade animals of all kinds has now been practised for so many years with such clear success as definitely to prove the Texas climate entirely suitable to most of the finest breeds. In competitions with those of other states the Texas animals carry off at least their share of blue ribbons. At the great Dallas State Fair one sees as

fine stock as may be seen anywhere. It is with stock as it is with a number of other things: Texas is producing as good as there is in large amounts, but not in amounts commensurate with her duty or her opportunity. The grading-up process has not yet been carried far enough. The value of Texas stock per head is yet comparatively low. One finds too few pure-bred Angoras, Merinos, and Clydesdales in comparison with ordinary low-grade goats, sheep, and horses. Grading up, while steadily proceeding, has been a little handicapped by the fact that the highly developed breeds raised under very artificial conditions do not succeed quite as well as could be desired under what are more natural or open-range conditions. The problem has been to find high-grade stock that could be raised with the minimum of attention. The knowledge gained through many trials is now successfully solving the problem. The grading-up process is in full swing.

Millions of years ago thousands of primitive horses of many different species roamed over the Western prairies in company with camels ten feet high, elephants, and many other animals which formed an extensive and varied circus long before there were any small boys to look at it. To show how numerous horses were in very ancient days, suffice it to state that in Mt. Blanco, in Crosby County, the skeletons of six horses were found in an excavation no larger in area than an average house. Thousands of years before the white man came all of these horses had become absolutely extinct through causes that the geologist has tried so far in vain to determine. When the Europeans, a short four centuries back, began to find their way over the Amer-

icas, they found therefore no living horses, because there were none to find. At the sight of Cortez with his cavalry, on his wonderful journey from Vera Cruz to the Valley of Mexico, the poor Mexicans at first thought that real centaurs were upon them, that the rider and his horse were one and the same terrible beast. In 1545, when Coronado came into New Mexico and the Texas Panhandle, he found the Indians using dogs as beasts of burden. Early in the eighteenth century horses were still unknown to these Indians. But the various Spanish expeditions lost horses on the prairies from time to time, and from these lost ones undoubtedly came the wild mustangs of song and story. Says Will C. Barnes in "Western Grazing Grounds":

"There has been a great deal of romantic nonsense indulged in over the mustang. The facts are that the true mustang was a small-boned, undersized pony, generally of an 'off' color, mean of temper, and narrow between the eyes. Nor is there anything to prove that because he came over with the Conquistadores, he was of royal Arabian descent. The Spanish people have never been noted for horses of very good blood. 'Mustanging' was like trout fishing: it is always the big ones that get away. When you did get a bunch of them into a corral, you found they did not look half as large and handsome as when they were first sighted on the prairie."

Let us, however, not longer speak ill of the dead. The mustang is gone, the Spanish pony is becoming rare, and even the cow pony is decreasing in number. The bucking horse is as scarce as those who know how to ride him. The Texas horse has become very like the horses "back East."

Scarcely worth breeding twenty years ago, now threatened by the motor car and drafted into foreign wars, horses have increased in number in Texas hardly at all since 1890. Then there were two people to one horse, now there are four. If everybody were on horseback now, the horses would soon be swaybacked.

In contrast to a nearly fixed number of horses, mules have quadrupled since 1890, and Texas now has twice as many as Missouri, popularly supposed to be the chief home of the long-eared but sagacious "donk." At present it seems that in 1920 Texas will have about a million each of horses and mules. The Texas mules are increasing in value as well as in number. Formerly mules were extensively imported, but they are now being raised at home. Like the horse, the mule is scattered all over Texas almost in proportion to the human population. The burro, little brother to the mule, consorts chiefly with the Mexicans, but is much less numerous. Formerly, when a burro sold for two or three dollars and when feed did not cost so much, a large family of children could derive great and inexpensive delight from climbing all over it and beating it around town at the rate of a mile an hour. Neither climbing nor beating disturbed at all the philosophic calm of the patient ass who nibbled grass whenever the beating lagged.

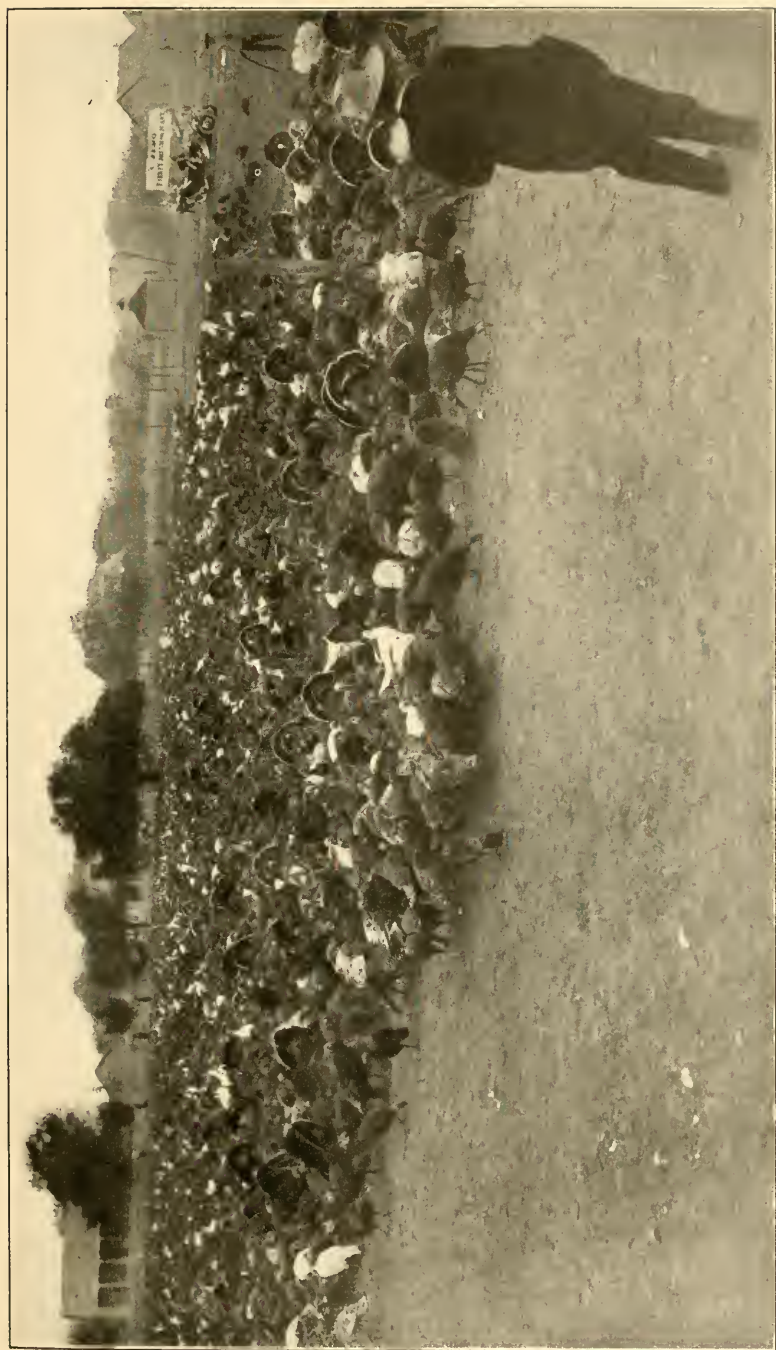
Why is it, let us ask the modern students of animal behavior—why is it that a mule so often objects to being bridled, while a horse does not? And why is it when a team of mules runs away, the mules are rarely injured? Whereas horses under similar circumstances nearly always smash the wagon and damage themselves. Further, why does

the mule possess the virtues of both ancestors—the sobriety, patience, endurance, and sure-footedness of the ass, the vigor, strength, and courage of the horse—while the mulatto is said to possess the vices of both the white and the black races?

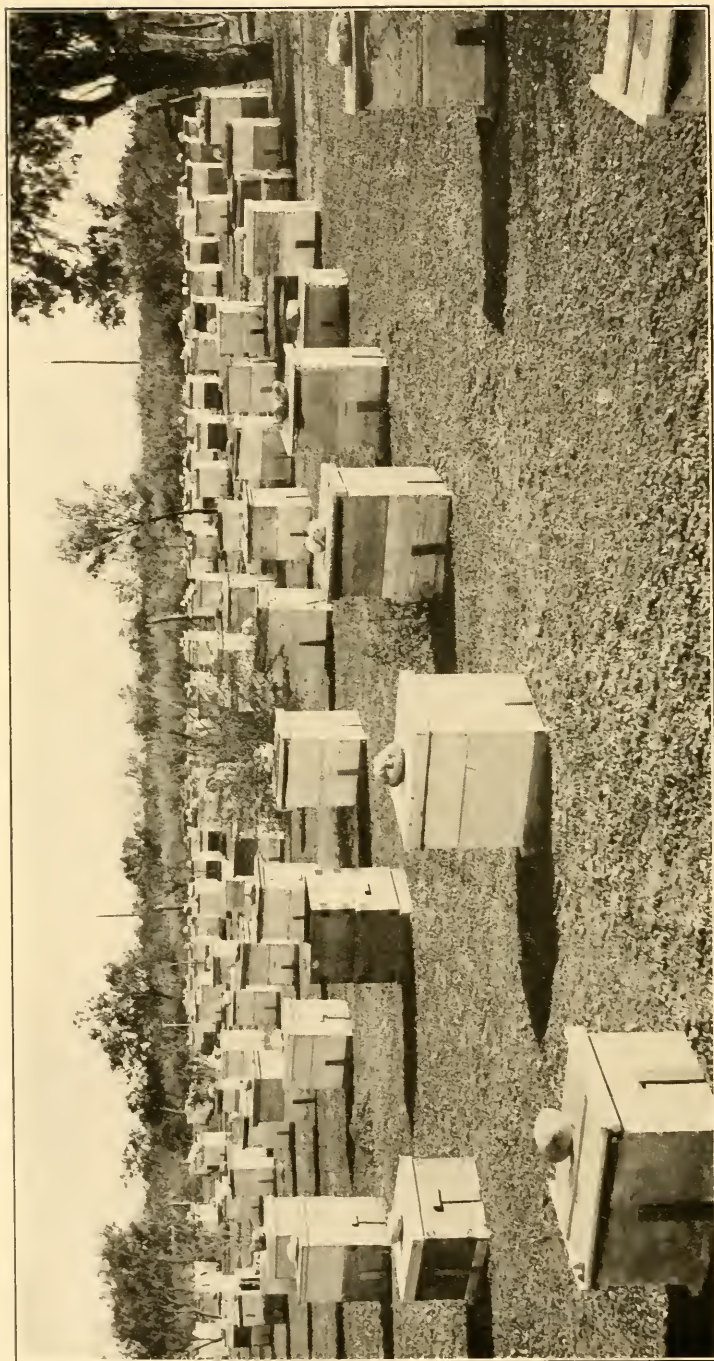
The average value of the Texas mule is \$100, two dollars more than that of the mule which has made Missouri so undeservedly famous, but, alas! \$69 below the average value of the New Jersey mule, which must become so valuable by feeding upon the rich drippings of the corporations which there prevail. Like the goat, the mule flourishes even in rough mountain pastures. His great sagacity is proved by his abundance in Texas and his rarity in New England: long ears are no proof of folly, even in a jackass rabbit.

“The sheep,” says an eloquent writer in *Industrial Texas*, “is the greatest politician among all animals. He has entered every campaign—and his fleece has often been the paramount issue.” Great politician as he is, the sheep has slumped in Texas nearly as badly as the old-time Populists or new-time Bull Moosers. Twenty-five years ago, when the number was a maximum, Texas, with four million, had 10 per cent. of all the sheep in the United States; now she has only 4 per cent. The two million sheep that are left, however, make a fair-sized flock, which is scattered from the Big Bend of the Rio Grande northeasterly to Bosque County, and even farther. This flock is worth from six to eight million dollars, and yields annually about ten million pounds of pretty high-grade wool. Some of the wool is of very high grade.

The raising of sheep has been a rather specialized industry,



THANKSGIVING TURKEY TROT, CUERO, TEXAS
Twenty thousand turkeys getting ready to parade the streets



Courtesy of Farm and Ranch

A UVALDE COUNTY APIARY

only one ranch or farm in sixty possessing any sheep. Val Verde, with 100,000, is the leading sheep county, while San Angelo is the greatest wool market, handling nearly half of the clip. Enormous individual sales to Boston wool men are made at San Angelo, at Kerrville, and at San Antonio. But little attention is paid to mutton, for which, however, there is a good demand, emphasis being placed almost exclusively on wool. In breeding up the range sheep, rams of the wool-producing breeds have been mostly sought. The Merino is the foundation of the Western graded sheep, but Shropshires, Rambouillets, Lincolns, and the curly fleeced Karakule from Asia, along with many others, are being used to grade up. Mr. Alex. Albright of Dundee thinks that his "Karaline," a combination of the two last-mentioned breeds, is going to be hardy and produce both wool and mutton well.

The heaviest clip in Texas was over eighteen million pounds in 1889. The reduction of the tariff on wool caused the annual clip to drop immediately to less than half of this maximum, but the clip was not much increased when the tariff was restored. Texas is overwhelmingly Democratic, but most of the Democrats do not live in the sheep country. When they do they are not very enthusiastic about taking the tariff off of wool, especially if they are running for office or raising sheep or goats.

Texas has "got" the rest of the United States in the matter of goats. She has a third of all the goats in the country and produces over half of all the mohair. On account of the climate the shearing is done every six months, and a well-bred goat will grow a little over an inch of hair a month.

The Texas mohair is of excellent quality and most of it goes to the San Antonio and San Angelo markets. A Texas Angora at one clip produced eighteen pounds that sold for \$115. The Angora, now the predominant strain in Texas goats, was introduced into Texas by William Landrum, and "has found among the hills of Texas, which have heretofore been considered waste lands, a natural home, food to his taste, and a climate adapted to his happiness." There is a lot of unused goat country, especially in the Edwards Plateau, and the number of goats, both low and high grade, is increasing rapidly. A billy goat cannot live exclusively on tin cans, but he can do very well on an occasional newspaper and a lot of shinnery. He doesn't care whether his newspaper is to-day's or last week's.

The gradual passing of the range hog is a sort of calamity. "Once the razorback roamed the woods as wild as a deer and as fierce as a wildcat." He furnished as good sport and better meat than the dwindling javalinas, the peccaries, or wild hogs of southwest Texas. He was swift and alert, but he didn't put on fat like the square-cornered Berkshire, Poland China, and other standard pigs of to-day. A bunch of razorbacks surprised while in a mudhole usually departed with a noise that could alarm the dead. Sometimes on his tail there accumulated two or three pounds of mud, which, beaten into a spindle shape by the impact of his legs and hardened by the summer sun, formed a sort of pendent jewel that may have been decorative, but which must have been inconvenient.

The coming of the farmer was even more fatal to the range pig than to the range cow. It was easier to vote a

“hog-law” that made it illegal to allow pigs to run at large than it was to build fences around the fields. “Hog-law” elections were frequent and hotly contested in counties and precincts. The friends of the range hog were gradually outvoted, “hog-laws” spread, and the free pig was more and more confined to those pens and hog-proof enclosures where we find his obese representatives of to-day. We do not find very many of them, however, because there are not more than six hogs on the average to a farm in Texas. It is some comfort to their owners that they are better bred and worth a lot more money than the primitive razorback who sought acorns by day and avoided panthers by night. Although the number of hogs in Texas is small, too small, under three millions, in fact, Captain Charles Schreiner, a great cowman of Kerrville, is said to own more hogs, many of them on the range, than any other man in the world.

The poultry business in Texas is claimed to have reached mammoth proportions by those who do not realize what a small quotient you get when you divide by the number of people in Texas. Go to Cuero to see the famous turkey trot, where several thousands of turkeys are gathered into one drove, and you will come away with the notion that the half-million turkeys in Texas would form a mighty big flock indeed if gathered together. Several towns ship Christmas turkeys by thousands, yet the people of Texas could eat every turkey in the state at two meals and have nothing left for hash. Next day they could eat all the geese for dinner, and the following day could dispose of all the ducks, pigeons, guineas, and ostriches (there is an ostrich farm at El Paso, and, as Walter Woehlke says, an ostrich drum-

stick undoubtedly contains a vast quantity of nutriment) that are reported in the statistics. The chickens, supposed to number four or five to each person, would not last for a week if Texas doctors were to put the people on a purely poultry diet. Eschewing the chickens but eating their eggs, one egg for breakfast is all that the average Texan would get all day. Of course, there are far more chickens in Texas than are reported; assuming that there are twice as many, there are still too few to feed the unconverted sinners after the good people have eaten all the fried chicken they want at the summer camp-meetings.

The busy bee is not improving each shining hour as much as was once the custom. Fifteen years ago Texas was producing annually nearly five million pounds of honey to California's four million; five years ago, alas! only three million to California's ten million. Nor is the production of honey appreciably increased by the finding of bee trees in the woods. Trees full of honey still exist, and wood-choppers as of yore assault them fiercely to get at the honey that has been accumulating in them for years. Along the Southern Pacific in the bee country it is said that the bees occasionally use the bridges for hives and that you can get honey by putting a bucket so as to catch it as it is jarred out of bridge posts by the passing trains. The Western bee is increasing faster than his Eastern and Texas kinsmen, and the Italian bee is displacing the German bee. Less than one farm in ten has bees upon it, and a considerable amount of honey might be made out of bee brush, mesquite, huisache, cotton, and the other flowers and blooms that now, almost beeless, waste themselves upon the desert air. Sadly

decreased as is the sweetness of Texas, enough honey is made to supply home consumption and to send a considerable surplus away. Uvalde has been said to be the greatest shipping point for honey in the world: 3,000,000 pounds in 1903 is the record. But the decline in the production of honey in Texas and the increase in California may have robbed Uvalde of her world's championship. Quien sabe? Texas should keep enough bees to utilize the myriad blossoms on her catclaws and juagillas. It is better for her to be stung by her own bees than to be excelled by California in honeyed sweetness.

CHAPTER VII

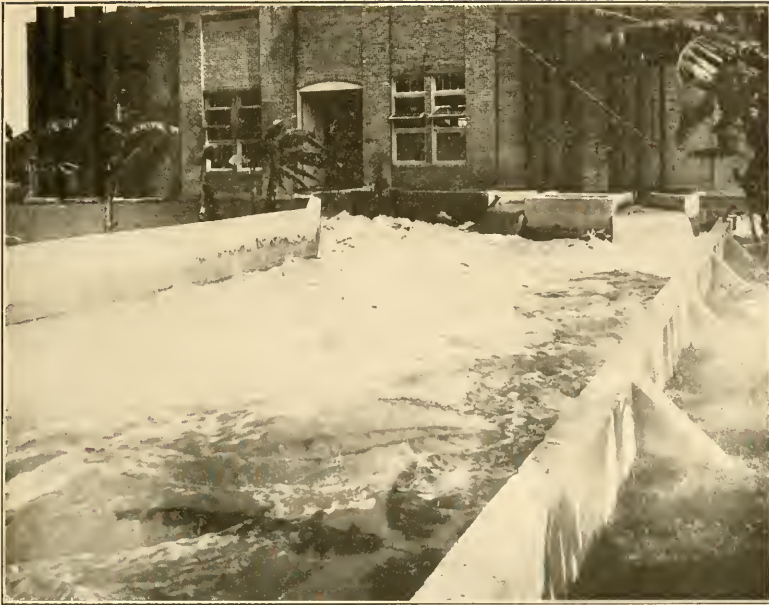
TURNING THE WATERS

"Jim Jones had energy, brains, and grit,
He plowed when it rained, he plowed when it quit,
And his beautiful crop was his laudable pride
Then it withered, wilted, drooped, and died,
For the hot winds blew when it ceased to rain
And Jim's noble effort was all in vain.

.
He's happy now for he came to the west
To an irrigable farm that's one of the best.
He just turns the crank when he wants it to rain:
When he wants it to quit he turns it again."

—"The Man with the Plow in the Beautiful Leon Valley," by G. A. Beeman.

WHEN Coronado journeyed northward in 1540 on his vain search for the golden cities of Cibola he found irrigated fields along the Rio Grande in the neighborhood of the as yet unborn El Paso. An old Indian tradition tells us that the Yumas had great irrigation works on the Pecos, centuries ago, and that the raids of the Apaches and Comanches forced them to move westward to the Rio Grande and later to the Great Colorado River in Arizona. In support of this story, at Toyah Springs there are evidences of very old and primitive irrigation works. Doubtless the Pueblos and some of the other western Indians practised irrigation many hundreds of years before Columbus meditated on the rotundity of the earth. It was therefore following custom for the Spanish padres to employ the Indians in building irrigation ditches on their mis-



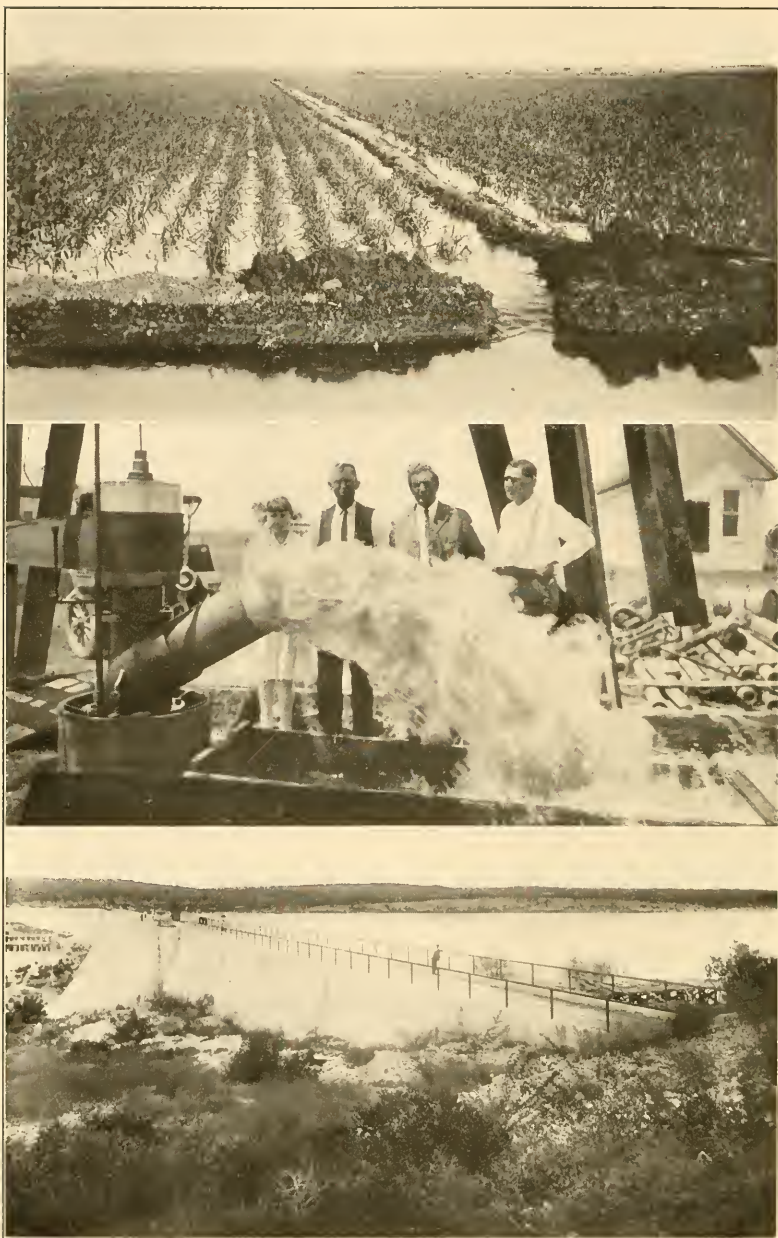
Photograph by Wheelus, San Benito

FLUME, TWENTY-SIX BY ELEVEN FEET, ON THE RIO GRANDE
Carrying 250,000 gallons per minute, and supplied by two 60-inch centrifugal pumps



Photograph by Wheelus

REINFORCED CONCRETE FLUME ON MAIN CANAL NEAR MERCEDES



Photograph by Wheelus, San Benito

IRRIGATING ONIONS AT HARLINGEN

ONE OF THE SHALLOW ARTESIAN WELLS AT LUBBOCK

MEDINA IRRIGATION CO. DAM

Eight-million-dollar system built by Pearson of the Pearsen Syndicate

sions. In 1730, to cite a conspicuous and still-existing example, the San Pedro ditch, now surrounded by San Antonio houses, was dug. Numerous other "acequias" were dug at the other missions, but, of course, judged by modern standards, no very great acreage was watered.

The early American settlers in Texas, coming by way of the well-watered East, did not practise irrigation, and it was not till 1869 at Del Rio, after the population had spread through the eastern half of the state, that what may be called modern irrigation began in Texas. Since 1870 there has been a gradual development, accelerated by two rapid expansions, one in rice irrigation and the other in the lower Rio Grande Valley. The abundance, nearness, and cheapness of fertile and fairly well-watered land and the absence of any United States reclamation activities in Texas (due to the fact that the state has owned all the public lands) are two important circumstances which have retarded irrigation. All that has been done has been due to private initiative. It is only recently that even a Board of Water Engineers and a Reclamation Department have been created by the state to help the deserving and to hinder the rapacious.

The only United States reclamation project affecting Texas is the enormous Elephant Butte dam in New Mexico, which will store Rio Grande floodwaters in the largest reservoir in the world for distribution later over 100,000 acres in New Mexico, 25,000 in Old Mexico, and 45,000 in Texas. Modern El Paso and ancient Ysleta, two hundred years older, will soon be in the midst of gardens producing in their favorable climate fruits and vegetables of a most

delicious flavor. The El Paso country is said to be the only place where the Bartlett pear attains perfection.

Irrigation projects in Texas fall into three fairly well-marked divisions. Into the first should be put those relatively small enterprises undertaken by private persons or small companies which by gravity or windmills or engines are taking water from wells, springs, waterholes, lakes, small streams, and rivers. Such enterprises are very numerous and very widely scattered. For example, there are nearly a hundred about San Angelo. It is difficult to determine their total acreage or crops. They will undoubtedly increase in numbers and importance and more and more artificial reservoirs, "tanks," will be built to supply them with stored storm water. The "run off" of the streams which takes to the Gulf—mostly in huge floods—from one to three inches of rain a year is literally a big leak in the Texas housekeeping. Water is too valuable to use in making spectacular river floods that benefit nobody but newspaper reporters. This leak, however, is popularly supposed to be much larger than it really is. The rivers really carry away only a small percentage of the total rainfall.

In addition to these minor but numerous irrigation plants there are the big enterprises which attempt to irrigate thousands of acres and involve big pumping establishments and the buying of water on the part of the individual farmers scattered up and down the long irrigation ditches. These big projects are divisible into those intended for rice and into those intended for other crops. Irrigation on a large scale, particularly in the West, has not escaped the promoter and land agent, who by their neglect of stream

measurements, their failure to distinguish between average and minimum flows, have brought to failure widely heralded enterprises and thereby greatly damaged legitimate and sensible developments. The blind leading the blind often fall into a very dry irrigation ditch. Sometimes water has been expected to run uphill where there wasn't any water to run at all.

In very, very round numbers, perhaps five million acres in Texas are irrigable. More or less vague "projects" already cover three millions, of which less than a million are "under ditch." About 500,000 acres are actually irrigated; about half is in rice and the remainder in "anything that grows." Most of the water is supplied from streams by pumping. Perhaps 10 per cent. of the water comes from wells. Nearly all of the water for rice and almost half of that for the other crops is pumped, the total capacity of the Texas pumps being about six or seven million gallons per minute.

The big rice areas are on the Sabine near Orange, on the Neches near Beaumont, and on the Colorado from Eagle Lake down. The first irrigated rice in Texas was grown in 1862 by Dr. R. P. Sholars in Jasper County. He put a dam across a clear-running stream and thereby made a rice field by overflow. He husked his rice on an old grist-mill and gave away what he could not eat. Pumping water to the rice, a method once nearly peculiar to Texas and Louisiana, began in 1893. In the Carolinas the tides in the coastal rivers are used almost exclusively to bring water to the rice.

The largest irrigated areas not planted in rice are along the Rio Grande above Brownsville and below El Paso, along the

Pecos at Barstow and Grand Falls, on the Concho near San Angelo, on the San Saba at Menardville and San Saba, and on the Nueces at Cotulla and Corpus Christi. The 60,000 irrigable acres below the Medina Dam, the cause of the beautiful Medina Lake and a holiday spot for San Antonio forty miles away, are being put in cultivation. Laredo now reeks with the odor of irrigated onions, San Benito with cabbages. Just as the Elberta peach, citrus fruit, and other booms passed, so has the south Texas truck-farm boom passed, leaving many people poorer and wiser. Costly mistakes were made, but the period of experimentation is passing, and irrigation farming on the lower Rio Grande is now settling down to a steady and reasonably profitable course.

The lower Rio Grande irrigation boom was of considerable magnitude. Several of the largest plants in the world were built, feeding hundreds of miles of canals and laterals; some \$15,000,000 was spent in development, and twenty-five thousand white people moved in. The Rio Grande was not able to supply all the needed water; marketing difficulties, frost, and ignorance led to many losses. Irrigation companies are being taken over by public drainage districts at Harlingen and Donna. A solid future exists based more on field crops and stock and less on sensational truck raising than was the iridescent boom.

Near Pecos City are two shallow water belts: from Hereford in the southwestern Panhandle southward and eastward to Seminole, Midland, Plainview, and Lubbock lies the great shallow well-irrigable region. How much water these wells can supply permanently is unknown, but it is



TYPICAL LONGLEAF PINE OF THE TEXAS-LOUISIANA REGION



CYPRESS SWAMP

Near Jefferson—Bulletin No. 47 in Bureau of Forestry

LONG TRAIN AT THE DEWEYVILLE PLANT OF THE SABINE TRAM COMPANY

Courtesy of C. E. Walden

TRANSPORTING LONGLEAF YELLOW PINE LOGS BY WATER IN SOUTHEAST TEXAS

Courtesy of the Sabine Tram Company

considerable. A good many hundreds of acres are being irrigated, and thousands of cattle are being watered from these wells. Their permanent possibilities form one of the most interesting subjects for speculation in Texas at the present time. The "Artesian Belt" is another interesting region, south and southwest of San Antonio, to which the above remarks also apply.

The laws relating to irrigation are amusing, irritating, incomplete, and imperfect. The code handed down by Saxon forefathers didn't cover irrigation; Thomas Jefferson and John Marshall were silent on this topic. Even that palladium of our liberties, trial by jury, doesn't seem to get anywhere, though proper irrigation of a jury has often brought peculiar results. Perhaps this explains the origin of the slogan, "Rain is a mighty poor substitute for irrigation." There is no law restricting the sinking of water wells. The owner of land is popularly supposed to own straight down to a point at the centre of the earth, but a neighbor can sink a well nearby and drain the water from under land which is not his own, though he cannot remove any rocks or coal or dirt. "It seems to have been the intention of the framers of the irrigation law of 1913 that the State Board of Water Engineers should have control over the distribution of wells. The Attorney-General has held, however, that this does not come within the jurisdiction of the Board." An act in 1889 authorized the use of unappropriated running water for irrigation, provided riparian owners were not deprived of water for domestic purposes, the first user in point of time having the first right to use only enough water to irrigate properly the land susceptible

of irrigation by the ditch or canal. This act brought forth some remarkable water claims. One man would ask for an amount twice that in the river, another for a certain number of square feet of water. An apparently comical feature of the law provided that a new user of water must notify the people upstream, not downstram, of the amount of water he is allowed to take. He is reducing the water supply of those below him, which does not concern him: what he is interested in is that the people above him shall not use that to which he is entitled. There is a serious aspect to these "first come, first serve" laws, however, to which attention is called by the Board of Water Engineers which strongly advises against grants of water rights in perpetuity. "West of the 96th meridian . . . the unconditional ownership of this natural resource, water, can be made virtually to enslave the entire population." Ultimately, in man's slow fashion, irrigation laws will be perfected and a fair and maximum utilization of the water secured.

We turn now from the putting of water on land to the keeping it off, or getting it off when it is once on. We blow on our hands to warm them, we blow on our soup to cool it, we spend money to go, we spend money to come back, we build embankments to keep the water both on and off land, we dig both irrigating and drainage ditches. Consistency is not the jewel it has been reported to be.

The Texas law now authorizes the foundation of either levee improvement or drainage districts to impose taxes and sell bonds for reclamation purposes. To issue bonds requires a two-thirds vote of the landowners in the proposed

district. Mr. Arthur Stiles, State Reclamation Engineer, estimates the total overflow land at 3,000,000 acres, the swamp land at 5,000,000 acres. He also estimates that more than 150 miles of levee have been built protecting 100,000 acres from overflow; that nearly 2,000,000 acres of swamp lands are within the drainage districts already organized. The overflow lands, of course, lie along the lower reaches of the rivers, the swamp lands lie along the coast.

Such lands when reclaimed are so enormously productive as amply to repay the cost of reclamation, a huge coöperative enterprise that must be largely and wisely undertaken. The United States Department of Agriculture is now making comprehensive surveys for a complete system of drainage ditches in the coastal swamps; the state is doing the same for levees along the lower rivers. Some four or five millions of dollars of bonds have been sold, although the absence of recent floods has delayed levee building to some extent. When there are floods you can't build levees, when there are no floods, levees are not needed. A rainy day is sure to come, however, and it is a matter of record that a million bales of cotton were prevented from maturing by a single flood, that a lack of drainage in the coast country has seriously checked the development of that region.

Down in Louisiana, according to George Endress, the alligators used to damage the railway embankments by nosing their way through them in going from one pond to another; in Texas it is dry-weather cracks that most endanger the levees. The fact that Texas is a land of contrasts is thus further emphasized: one day a levee is cracked

by drought, the next day it is swept away by a flood. In a dry year, according to Lon Hill of Harlingen, it requires three acres of moisture to rust a nail; in a wet year a square inch is ample to tarnish the annual production of the United States Steel Corporation.

CHAPTER VIII

HARVESTING THE TIMBER

"These comparisons of values and tonnage are made for the purpose of bringing before the mind of the reader the fact that this timber is not going to last always."—*Hon. Sam. T. Swinford, 1911 "Texas Almanac."*

THE lumber situation in Texas is decidedly unbiblical, the harvest is not overly plenteous, and the laborers are not few: there are 25,000 persons engaged in attacking the lumber-producing trees of Texas at a rate that will utterly remove them in fifteen years according to the pessimists, in fifty years according to the optimists. In addition to this horde of lumbermen, hundreds of woodchoppers, scattered everywhere, are cutting cordwood and fence posts, and few Texans there be who have not wantonly cut down a tree or two that they will have to account for in the great day of reckoning. The present writer is now ashamed of holding what is probably a world record: by cutting down a lone scrub cedar on the south bank of the upper Palo Duro Cañon he cleared about four hundred thousand acres of land in five minutes in 1886. Others, however, have destroyed far more trees in clearing much less land.

Says Professor W. L. Bray: "Formerly an unbroken forest covered the great plain from Virginia through northern Florida to eastern Texas and from the foothills to the sea. Although the Coast Plain continues toward the Rio Grande,

the further extension of this forest is checked near the Brazos River by the drier climate of the southwest. Here its vanguard is broken into straggling detachments, of which only the hardier push onward along the prairie streamways



From Bulletin No. 47, Bureau of Forestry, U. S. Dept. of Agriculture. Timber of Texas, omitting mesquite, chaparral and bottom swamp, and bayou timber

or up the deeper cañons of the hills. It is a striking phenomenon, this breaking up and gradual dwindling away of so vast and vigorous a forest. Like a vast wave that has rolled in upon a level beach, the Atlantic forest breaks upon

the dry plains—halting, creeping forward, thinning out, and finally disappearing, except where along a river course it pushes far inland.” “The long-leaf pine area in Texas includes about 5,000 square miles of that fine body of Texas-Louisiana timber which is unique in its isolation far to the southwest of the main long-leaf belt, east of the Mississippi. The Texas portion is shaped like a broad wedge thrust in between the loblolly at the south and the short-leaf at the north, and extends southwestward to the Trinity River, where the overlapping areas of loblolly and short-leaf form its western boundary.” “Long-leaf pine is characteristically found in heavy forest with a practically pure stand. This purity of stand, combined with the good quality of the timber, makes the long-leaf forest both the most valuable and the most easily marketed timber resource of the state. The trees make a large and perfect growth, yielding logs of a maximum diameter of from 36 to 40 inches, with a clear length of 60 feet.” “The short-leaf pine grows to great perfection in east Texas, veteran trees attaining diameters of more than 50 inches. The densest forests are of loblolly pine, which sometimes produce over 15,000 feet to the acre.”

Concerning the amount of timber still left, opinions differ widely. According to some estimates, twenty years will see the industry down to portable sawmills. Contrariwise, it is said that such estimates are made by those who do not even know approximately the stumpage of Texas. The United States Bureau of Corporations has just published an elaborate report on the lumber industry in the United States, from which the data that follow are nearly all extracted. This report estimates that twenty billions of

board feet of long-leaf pine and an equal amount of short-leaf and loblolly are still left standing on 5,000 square miles of long-leaf lands and 30,000 of short-leaf. This total of forty billion feet is being cut at the rate of two billion a year. A billion feet of lumber, be it understood, is enough to build about 60,000 six-room houses or to furnish cross ties for 3,000 miles of railroad. The supply of the more widely scattered hard woods is also estimated at twenty billions, but only about eighty millions is being cut annually. The Texas lumber supply of sixty billion feet, therefore, seems to be about equally divided between long-leaf pine, short-leaf, and hard woods. In addition, Texas has less than a quarter of a billion feet of cypress left. Apparently about a third of the hard wood is oak and a fifth gum. More than half of the small amount of hard wood cut is oak. Obviously pine is the overwhelmingly preponderant Texas lumber, the more scattered hard woods not having yet been very seriously attacked in east Texas, where they are most plentiful. Elsewhere, being scarce, the hard woods have been cut extensively for posts, ties, and firewood.

Long-leaf, short-leaf, and loblolly all produce a lumber very much alike that goes under the common name of yellow pine. More than a third of the lumber cut in the United States is Southern yellow pine. The dressed lumber is used mainly for buildings, the undressed is consumed chiefly by the railroads. In Texas the lumber business depends for its prosperity very largely upon the railroad demand. So far, 1907 is the banner year in lumber production, and owing to the failing supply it may retain the banner forever.

The hard woods have been culled pretty generally several miles back from the railroads and some have been rafted down the rivers, but the great body of hard woods still remain. Its hour has come, however: unless used as lumber it will be burned to make way for the plow.

Some people maintain that the yellow pine has been so cut down that only an inferior quality now reaches the ordinary consumer. Others say that while many mills will doubtless have to go out of business in a few years, there are some with a cut of thirty years of virgin pine before them. "Just lumbering along, but that's our business," is the way one lumber firm describes its operations. Homogeneous as is the Southern yellow pine throughout its habitat, nevertheless when the staff poet of the *American Lumberman* penned:

"For Georgia loves her tree of trees,
The brother of the sun and breeze,
The dear old yellow pine,"

the editor of the *Gulf Coast Lumberman* at Houston exhibited both local pride and poetry when he came back with:

"You ought to see the pine we ship
This side the dear old Mississip."

"Dear old yellow pine" is a phrase that may now be used in two senses. Pine will soon be so valuable that wood preservatives will be as generally forced into it as mummifying bitumen was once upon a time crammed into the stomachs of defunct Egyptian kings. As yet, however, to the dismay of conservationists, preservatives are often not used, lumbering is wastefully done, and underbrush fires prevent

reforestation by burning up all the young trees and all the humus in the soil. Even without fires the long-leaf pine is cut so closely that but few trees are left to perpetuate the forest. Loblolly reforests much more readily than long-leaf. Says Professor Bray: "With the present market demand and the prevailing methods of logging, the forest is so depleted and left in such a weakened and exposed condition that no future stand can be counted upon. But there is a good deal of long-leaf land on which logging fifteen or twenty years ago, when the market demanded culled stock, left a very considerable amount of young timber and imperfect or inferior old trees. Such areas, however, are being lumbered again for ties. Over 125,000 acres are being cut annually in such a way that the land will not grow valuable forests again." Texans of the future are going to raise their own lumber if they have any. The present generation is not going to leave them any if it can help it. When the demand or the price of lumber falls off ever so little a wail that would awaken the envy of Jeremiah goes up out of east Texas, where they want to get the lumber and get it quickly. If the woodman spares the tree, he won't get rich. As a result, lumber is getting so scarce we are ceasing to use it even in conversation: those persons whose occipital regions were said to be wooden, when lumber was cheap, are now called boneheads. However, lumber can be slowly regrown in Texas if we absolutely must have some. A better way would be to provide fire protection for both trees and lumber, not to mention sinners.

Texas with her sixty billions of feet of standing timber has only a ninth as much as Oregon. California and

Washington each have six times as much as Texas; Idaho and Louisiana each have twice as much. Mississippi, Arkansas, Florida, Montana, and Alabama, in descending order, are in the Texas class. Texas is ninth in the amount of standing timber, eleventh in number of lumber workers, and fifteenth in value of lumber products. A country mostly prairie or mesquite covered cannot be expected to take first place in the lumber industry.

The annual cut of lumber, now nearly stationary, is nearly three times what it was twenty-five years ago, and almost twice what it was fifteen years ago. Although the value of the standing timber, or "stumpage," as it is called, has trebled and even quadrupled during this century, the retail price of lumber has not increased in anything like the same ratio. This is due to the fact that the cost of labor and transportation, which have not increased nearly so rapidly, enter far more largely into the price of lumber than does the stumpage value.

The production and distribution of lumber demand much labor and many freight cars. Nearly a third of the wage-earners in Texas manufacturing is engaged in the lumber industry, and a fifth of the tonnage of the Texas railroads is due to lumber and other forest products. The cotton crop is six or seven times as valuable as the lumber cut, but gives rise to less than half as much tonnage.

Do not acquire the notion, however, that the value of the standing timber is inconsiderable. The Rice Institute trustees are reported to have sold, a few years ago, for \$5,000,000 the timber on a piece of land in Louisiana that W. M. Rice, the founder of the Institute bought, land and

all, for \$60,000 in 1882. Assuming the value of the standing yellow pine in Texas at \$4 per thousand feet, the total value of the "stumpage" comes to \$160,000,000. This is an increase of about \$100,000,000 since 1900, an increase that will bring a neat profit, especially to the three largest owners, who hold about a third of all the yellow pine in Texas.

The lumber industry in Texas, as elsewhere, is one concentrated ownership, although obviously there can be nothing in Texas to rival the holdings in the Pacific northwest of the Southern Pacific and Weyerhaeuser interests, which together control three times as much lumber as there is in all Texas. The three largest Texas holdings include 22 per cent. of the total Texas stand, 55 per cent. of the long-leaf stand. Only fifteen holders control 77 per cent. of the long-leaf pine and 31 per cent. of the short-leaf. The eighty-one largest Texas holdings, each having more than 60,000,000 feet, embrace 55 per cent. of the total Texas stand, 86 per cent. of the long-leaf stand, 72 per cent. of the total yellow pine stand. It is evident that the ownership of the standing yellow pine is very much concentrated. On the other hand, the more scattered hard woods are controlled by many owners, the eighty-one largest Texas holdings including only 20 per cent. of the hard woods of the state. Concentration, therefore, is greatest in the case of the most valuable species. Concentration of the ownership of the standing timber is naturally associated with concentration in the manufacture of lumber. One-twelfth of the lumber concerns employ about two-thirds of the workers in lumber. Grants of public lands to the railroads were not

he cause of lumber concentration in Texas, as they were in the Pacific northwest. Texas gave a great deal of land to her railroads; most of it is prairie land and some is so treeless that a whole colony of birds is forced to nest in each lonesome bush. In the lumber business natural conditions do not favor the small producers as far as owning timber, logging, and running sawmills are concerned. Of course, there are a number of small planing-mills and other woodworking manufacturing establishments variously scattered. The big fellows are running one part of the lumber industry, the little fellows the other; the big fellows are the wood producers, the little fellows are the woodworkers.

Although the figures relating to the lumber industry are included in the chapter devoted to Texas manufacturing, it is not out of place to end here with this statement: There are in Texas more than 800 establishments working at one or more details of lumber manufacture: half of these concerns are saw-mills; the capital invested is about \$40,000,000; the value of the annual product is nearly \$40,000,000; 25,000 people are employed; in addition, in the mechanical industries, there are 25,000 carpenters. Add in the Mexican cordwood and fence-post men, the charcoal burners, the youthful Washingtons with their little hatchets, and you'll find that a number of people besides politicians are sawing wood in Texas, most of them for more than eight hours per day.

CHAPTER IX

MINING

"Prior to January, 1901, when the Lucas gusher was brought in at Spindle Top, the wildest 'wildcat' that ever roamed the forest could not have foreseen that in four years the production of oil in Texas would rise to 28,000,000 barrels.

"Are there other surprises awaiting us? I do not know. If any man knows let him hie hence forthwith and secure his options. The old prophets are dead, and there are few, if any, lineal descendants."—" *Mineral Resources of Texas*," by W. B. Phillips.

IN DEFAULT of prophecies, guesses are allowable, but to change a guess into a certainty, Professor Drill has to be employed, and it costs a lot of money to send him down to look around. The money is being spent. In oil prospecting and development only there are more than a thousand holes being put down each year, mostly in proven territory. A good many of them, however, are "long shot, wildcat" wells dug in various places with hope alone as a guide, and, of course, are mostly failures. Those who attempt new things help by failure to pay the cost of progress. In mining the lure is strong; prospecting and development are going on in many places, and the annual mineral production in Texas is rapidly nearing \$50,000,000.

As yet, however, the mineral resources of Texas have been merely scratched. The total value of the recorded output of all the mines since the beginning of operations is not much in excess of \$300,000,000. Petroleum is responsible for more than \$100,000,000, clay products for \$50,000,000, coal

and lignite for more than \$40,000,000, the precious metals for \$10,000,000, miscellaneous products for \$100,000,000. What is this paltry \$300,000,000—scarcely half of the value of the farm products for one year—compared with the total value of the minerals that still lie under the ground? Mr. M. R. Campbell of the United States Geological Survey has estimated the supply of bituminous coal at eight billions of tons, the supply of lignite at twenty-three billions of tons. At current prices, on cars at the mines, this coal and lignite is worth about forty billion dollars, six times the present total wealth of Texas. At the present rate of mining, this supply will last for more than 5,000 years. If to the coal and lignite we add the large but unknown value of the other minerals, the total will run still higher into the billions. Texas is rich enough, actually and potentially, to attract the cupidity of high finance. Beware, however, of unwittingly investing in a mining venture, unless you would be a “shining mark for a mining shark.” Remember that a mine is a hole in the ground owned by a liar. Let us return, therefore, from potentialities to actualities, from billions to millions, from warm imaginings to cold facts.

Although the increasing industrialism of Texas is having a marked effect on mining development, the state is still far down in the list of mining states. Even the spectacular oil boom of the Gulf Coast in 1901 has since been eclipsed by the much greater Oklahoma and the still greater California booms. Texas is now fourth in the production of oil and second in the production of quicksilver, all of which comes from Terlingua, ninety miles from the railroad in the southern part of Brewster County, in the Big Bend of

the Rio Grande. During the last fifteen years, since quicksilver mining began at Terlingua, about 4,000,000 pounds have been refined from its native cinnabar.

In mining, as in other aspects of human life, the prosaic in the long run prevails over the exciting. Working with clay, coal, cement, lignite, limestone, salt, granite, pig iron, sand, gravel, lime, sandstone, gypsum, and iron ore seems to be quite unromantic; while hunting and finding oil, precious stones, gold and silver appeal to the most lethargic. Yet the production of the prosaic materials is almost twice as valuable as that of the exciting minerals. It is the old case of the hare and the tortoise.

Petroleum, however, has produced more money and more excitement than any other one substance ever extracted from the Texas earth. Oil "seeps" at various places which seem to have been known from very early times. Dr. J. A. Veatch, a competent observer and then the owner of the land on and about Spindle Top, in a letter dated 1835 stated positively that oil was under his land. Hundreds of others, enthusiastic but uninformed, have made similar claims and have erred in making them. Dr. Veatch happened to be right.

The first definite utilization of Texas oil may be attributed to Emory Starr and Peyton F. Edwards, who, about 1867, dug one afternoon some shallow holes on the margin of Oil Spring Branch about fifteen miles southeast of Nacogdoches. The next morning they skimmed off the oil and carried it to town, where it was used to oil harness and grease wagons. Later, before 1890, over a hundred shallow wells were dug in this region, and for a number of years a small but unknown number of barrels of oil was produced.

The second oil strike was made in 1879 at Greenvine, in Washington County, where William Seidell bored the Cervanke well to 150 feet and struck a strong flow of gas. The first appearance of Texas as an oil producer in statistical tables was in 1889, when forty-eight barrels came from two wells of George Dullnig, seven miles south of San Antonio. This oil sold for \$5.50 a barrel, a price that makes an interesting comparison with the 5 cents received during the early period of the Spindle Top oil overflow. During the period that followed 1889 only a few minor strikes were made, until 1894, when oil was struck in Corsicana in boring for artesian water. The first oil well was put down in 1895, striking oil in October and yielding two barrels a day. In two or three years everybody in East Corsicana had a well, and no lawn was complete without a pump which brought up several dollars' worth of oil per day. The production soon ran above 600,000 barrels annually, but has since declined. In 1898 Mr. J. S. Cullinan, now famous in the oil business, succeeded in financing and building at Corsicana a complete refinery, the first in the state. Nearby at Powell, in a different stratum, a different kind of oil was shortly discovered. So far the total combined production of the Corsicana and Powell fields has been above 5,000,000 barrels. The oil boom struck Beaumont early in 1901, before which time Texas had scarcely counted in the oil business. Mr. Patillo Higgins, in boring for water on Spindle Top Hill near Beaumont, struck several strata of sulphur. He succeeded in interesting Col. J. M. Guffy of Pittsburg, who sent Mr. A. F. Lucas, an Austrian engineer, to supervise the boring of a well. As luck would have it,

he bored through the oil without knowing it, but, removing the drill to sharpen it, out burst the gas and oil.

The Lucas gusher, drilled by the Hamill Brothers, startled all Texas and beyond. Oil was struck at a depth of a little more than 1,100 feet. It gushed to a great height, blowing out rocks and sections of four-inch pipe to a height of a hundred feet. At first the flow was 250 barrels an hour, but rapidly increased to 3,000, at which rate it flowed for ten days, until it was choked by caving in. This well broke all previous world records.

The great excitement produced by the Lucas gusher was much increased by the coming in of the Beatty gusher in March, and was fanned to a frenzy by a number of other gushers in rapid succession.

The boom was on. Beaumont was swamped by enthusiasts: people slept—if they slept—on sidewalks, against walls, and in chairs. Porch room even sold at a premium. All the accompaniments of a real oil boom were present. Land for miles around Spindle Top increased from \$5 to \$100,000 per acre in three months. Beaumont changed from a town to a city, from wood to brick. Derricks were soon as thick upon Spindle Top as quills upon the fretful porpentine. Southeast Texas was transformed.

The big oil men and corporations came into the field quietly and unobtrusively; the little fellows made a lot of noise. Stock in hundreds of oil companies was sold everywhere, and, as was to be expected, many investors lost and a few won. Prospecting, wise and unwise, went on everywhere. Lands were leased and subdivided until there was scarcely room to build a derrick.

The production of oil exceeded the means of storing it. A great deal was wasted; earthen reservoirs were quickly improvised; steel tanks, holding 50,000 barrels each, were soon constructed. Sparks and lightning ignited some of these; magnificent but expensive fires occurred. From Heywood Well No. 2 flowed, according to Mr. H. S. Reavis, editor of the *Oil Investors' Journal*, 8,000 barrels in two hours. This well produced 1,400,000 barrels in ten months. But the average life of a flowing well is short—only a few weeks—with constantly diminishing output. A few months suffice to change the proudest gusher into a well that must be pumped or abandoned.

Before 1904 more than 30,000,000 barrels had been taken out at Spindle Top; during the last ten years the production has averaged about a million barrels a year, but has pretty steadily declined. Glories pass and fade pretty quickly in an oil field, but things happen while they last: old Spindle Top, from 1,200 wells, has produced oil enough to cover its 200 acres twenty-five feet deep. Ought one to expect more?

The Sour Lake field, about twenty-five miles northwest of Spindle Top, was the second Texas field to come in abundantly. Drilling at Sour Lake began in 1893, yet it was not till 1903, when the W. B. Sharp well struck oil, that real production began. The Gilbert gusher, which came in during May, 1903, with nearly 20,000 barrels per day, set a host of operators at work. By the end of 1903 there were nearly 300 wells and 9,000,000 barrels had been produced, just enough to make up for the waning production of Spindle Top. Sour Lake fell off pretty rapidly from its

maximum, and is now doing only about a million barrels a year after having produced all told, about 35,000,000.

Luck was certainly, for a time, with southeast Texas. In 1904, to compensate for the waning Spindle Top and Sour Lake, the Batson field produced 11,000,000 barrels of oil. Batson is thirteen miles northwest of Sour Lake, and the gods smiled upon this field. The Santa Fé railroad had just been built through Saratoga, six miles distant; a large number of men and much machinery were ready to quit the other two old fields. The first producer well, as it happened, had been sunk in the very centre of the field, and, as a consequence, all the new wells were phenomenally successful. Unfortunately the field fell off heavily the very next year, 1905, when the Saratoga and Humble fields came in with a combined production of 19,000,000 barrels. The way a new field was discovered just as the old fields waned was very interesting and timely.

The Humble field, eighteen miles northeast of Houston, was a much larger producer than the Saratoga. Together with the three older fields and the minor Matagorda and Dayton fields, the seven Gulf fields made 1905 a banner oil year, with a production of 28,000,000 barrels. Since then the Gulf Coast production has steadily declined to less than one-fourth of this maximum. Recently deeper borings at Humble have greatly increased the output, and similar results may be attained later in the other fields.

The mode of occurrence of the Gulf oil is peculiar and interesting. It appears to be stored mostly in porous limestone, sometimes in sand, and lies underneath flat-top domes of impervious hard limestone that have prevented

the oil from long ago rising to the surface and wasting away. The arch of the Spindle Top dome seems, for example, to have had a rise of some 200 feet, with a span of about 4,000 feet. These subterranean arched domes often lie under surface mounds, underneath which crystalline limestone, sulphur, gypsum, and rock salt are often found. Contrary to a popular notion, oil sands are just like water sands or any other sands, except that they happen to contain oil. The porosity of the oil-bearing limestones seems to be sometimes as great as 50 per cent., and as the oil becomes exhausted salt water generally flows in. Gas and sulphur are very frequently associated with the oil. A few freak wells, after producing oil and then salt water, went back to producing oil before the salt water came again finally.

Wild notions concerning oil are very prevalent among those who know nothing of geology. Belief in underground lakes or pools of pure oil is general, and some even believe in a river of oil flowing from Corsicana to Beaumont. Such errors persist in spite of the fact that the Corsicana and Beaumont oils are quite different. Numerous vendors of bogus oil stocks find it to their interest to perpetuate such foolish notions among the ignorant.

Oil occurs not only on land but also in some formations that underlie the sea. Some oil fields probably underlie the Gulf, and seem to be leaking up through the bottom. Two such leaks are to be found in the Gulf just west of Sabine Pass. Other places where waves are stilled and do not break on account of oil on the troubled waters are known farther out in the Gulf. A peculiar substance called sea wax, undoubtedly a petroleum residuum, is fre-

quently found along the beach from Sabine Pass to Corpus Christi.

The Gulf oils, of which nearly 200,000,000 barrels have been taken out in Texas since the days of the Lucas gusher, are heavy oils, consisting half of excellent lubricating oil and half of kerosene and solar, together with some asphalt and a little gasoline. Sulphur occurs as an impurity, but is not hard to remove.

As a fuel, the Gulf oils are excellent, three barrels of oil being equivalent to a ton of the southwestern bituminous coals. The discovery of oil, therefore, accelerated manufacturing and railroading in Texas. The almost overproduction of the lighter Oklahoma oils is forcing the Gulf oils more and more to fuel uses. The navies of the world cry out for fuel oil. The Texas railroads are using several millions of barrels of fuel oil annually, "oil-burning locomotives, no cinders," being a much-used advertisement of the railroads. A Texan, A. M. McAfee, has won both fame and fortune by discovering an economical chemical process for refining the Gulf oils.

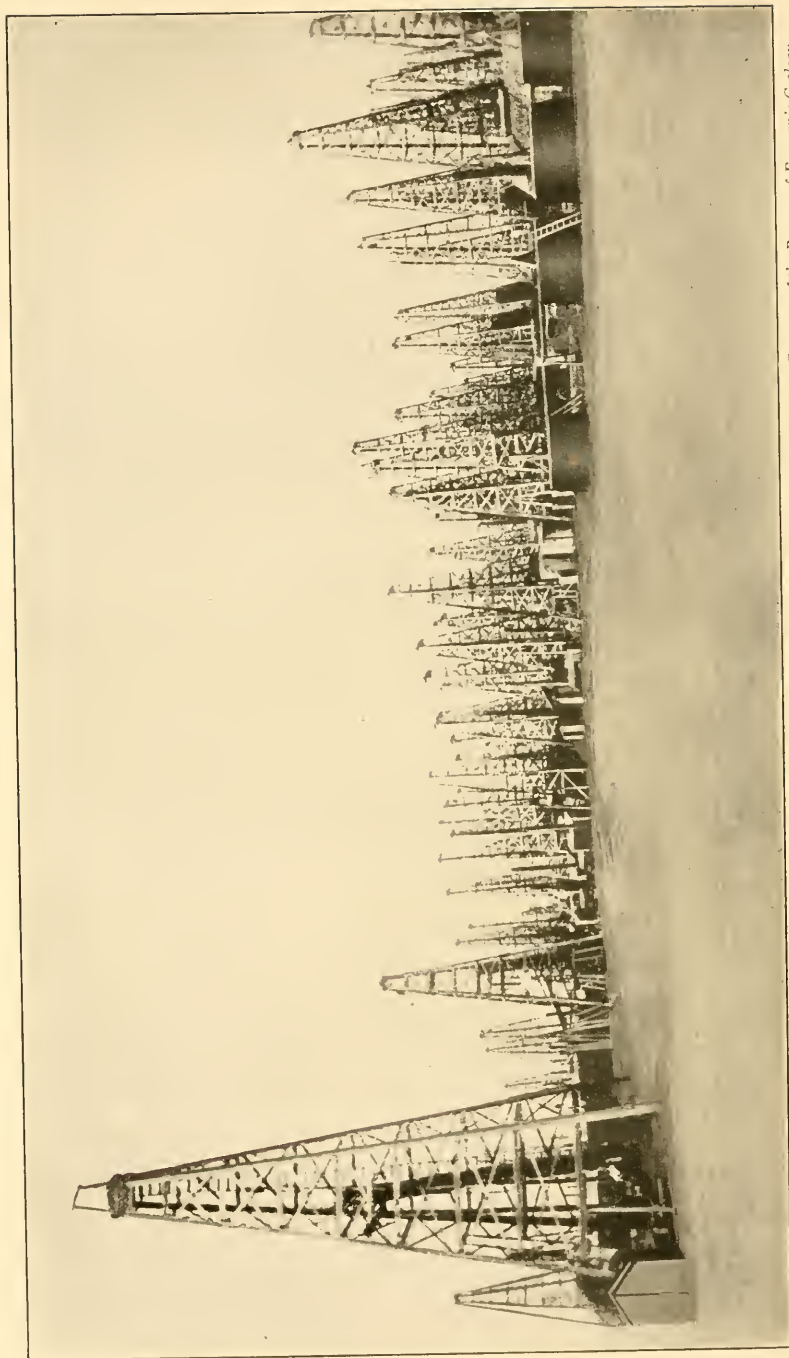
As the production of Gulf oil fell off the production of lighter, higher grade oils in north Texas increased. To the Corsicana and Powell fields were added, in 1904, the small Petrolia field near Henrietta, in Clay County, the small Marion field in 1910, the great Electra field in 1911. Oil was first struck at Electra in 1900 while boring for water. Several barrels were obtained at 150 feet. A company began boring for oil in August, 1909, but nothing startling happened until Mr. T. Waggoner, who owned the land, put down a deep well that struck oil in profitable quantity.



Copyright, 1901, by Frost

THE BEATTY WELL AT SPINDLETOP

Second of the Texas gushers, and a great producer. Oil struck March 26, 1901



A FEW OF THE 1,200 DERRICKS AT THE SPINDLETOP OIL FIELD

Courtesy of the Bureau of Economic Geology

It was not till 1911 that the field became a real producer with half a million barrels to its credit. The oil is of very high grade. It was Electra that checked the declining Texas production, which had reached its twentieth-century minimum in 1910, and sent it climbing up again by producing much oil in 1912 and more oil in 1913 than all the other fields put together. The Electra field, however, did not produce as much excitement as Spindle Top.

Prospecting for oil is now almost universal. The Thrall field near Taylor "looks good." The oil from this field is so rich in paraffine that the wells choke with it. The loss of time and the expense involved in melting out the paraffine have made this field an expensive one to work. Strawn, in the coal country, is producing 1,000 barrels a day. A field near San Antonio is developing. It is impossible even to mention the hundred new localities where oil has been recently found. There are perhaps 1,500 producing wells on the Gulf Coast, 1,100 in the Wichita-Clay field, 800 around Corsicana, 200 variously scattered. Add to these oil wells numerous gas wells in Clay, Shackelford, Limestone, Nueces, and other counties, which afford cheap gas to Fort Worth, Dallas, and fifty other towns, and it is plain that Texas will soon be as full of holes as Arnold von Winkelreid of blessed Swiss memory. The capacity of the Clay County gas field has been estimated at 200,000,000 cubic feet per day! Of gas and oil, let us say no more. A startling discovery somewhere may shortly revolutionize the whole situation.

Oil tank fires due to lightning are a source of heavy loss to the oil industry. Many such fires occur every

year. In 1904 the Texas Company lost 2,000,000 barrels at Sour Lake out of an earthen tank. The ignition of gas wells, notably the Corpus Christi well, has also caused enormous losses.

The prosaic story of coal and lignite, unlike that of oil, is one of slow but constant progress. For the last thirty years, with a few small setbacks, the production of coal has slowly increased until it is now appreciably over a million tons a year. A precisely similar statement applies to lignite. Although Texas contains 8,000 square miles of workable coal and 60,000 square miles of lignite—nearly as much lignite area as all the other states combined—this production of coal and lignite is trivial in comparison with the gigantic total of nearly 500,000,000 tons of coal for the whole United States.

More than half of the bituminous coal comes from: Thurber, in Erath County, the rest from the neighboring counties of Eastland, Palo Pinto, Young, and Wise. Sub-bituminous coal comes from the Rio Grande counties of Webb and Maverick, where the only coal-washing plant in the state is to be found.

Wood County is the chief producer of lignite, which is found over a wide area in many counties. The main lignite belt extends eastward from a line drawn across the state through Austin, Waco, and Dallas. The lignite is used mainly under stationary boilers, though some is consumed very advantageously by gas producers to supply gas engines. No lignite briquettes are made, though they could easily be manufactured with great economy. Says W. B. Phillips: "By converting the surplus gas, through gas

engines into electric current, a central power plant making briquettes could dispose of all the products from the lignite gas, tar, light oils, pitch, and sulphate of ammonia. The by-products from a ton of lignite costing \$1 could be made to yield from \$3 to \$3.50." Central power plants at the lignite mines or at dams on the rivers are favorite ideas, much exploited in print. For some reason nothing much as yet has come of such magnificent projects. They have, however, a solid basis, and doubtless will become realities.

The first real coal mine in Texas seems to have been the Hunt mine near Laredo, on the Rio Grande. It was opened in 1880. Earlier than this a little coal for local consumption was mined at Bridgeport, in Wise County, at Belknap, in Young County, at Crystal Falls, in Stephens County, and perhaps at other places.

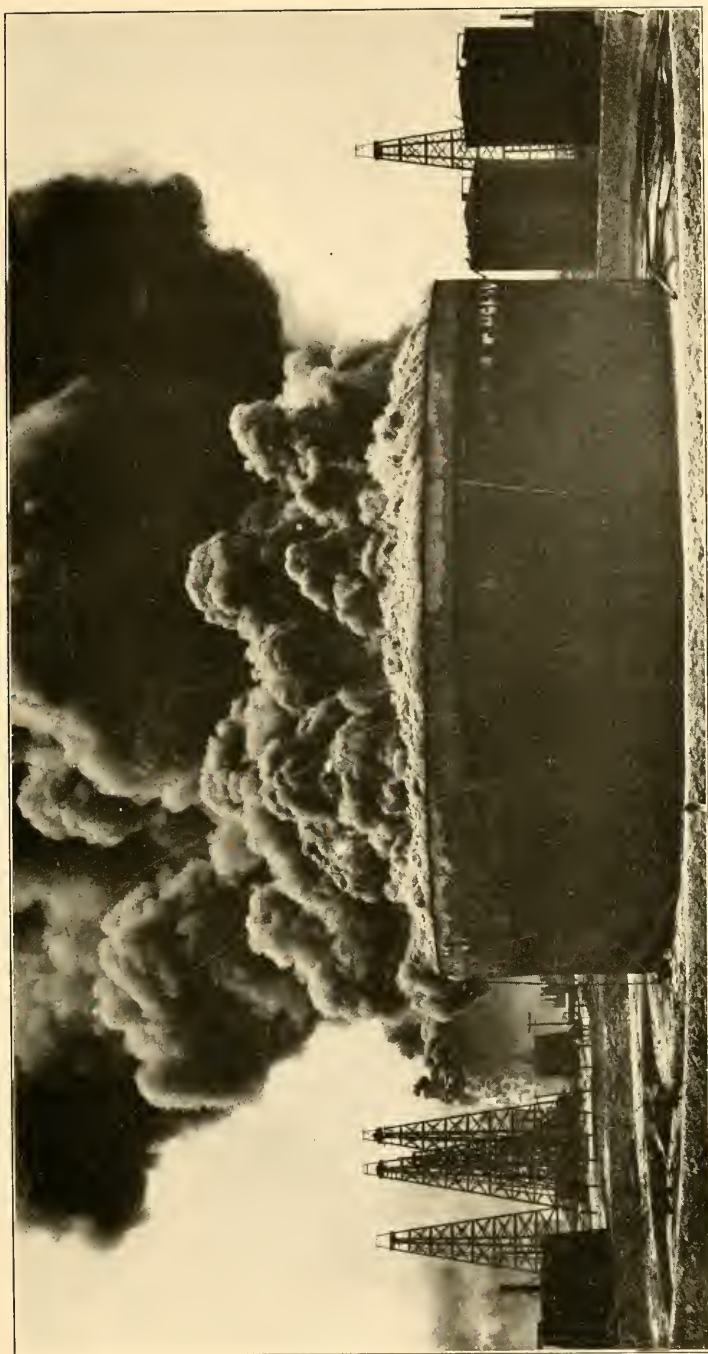
No pig iron has been made since 1909, when the state penitentiary furnaces shut down, although there is an area of some 1,300 miles, chiefly in Cass, Cherokee, and Harrison counties, where excellent limonite ore is found. It occurs in horizontal "blankets" from two to five feet thick, so near to the tops of the flat hills and ridges that there is generally less than six feet of earth to remove to get at the ore. This iron ore is now being sent to Galveston for shipment to the East. One cannot resist the feeling that a lot of fine opportunities in mining in Texas are somehow going to waste. It is true that Texas produces no coke for reducing ores, a difficulty which like those met in growing citrus fruits and in a thousand other enterprises ought not to prove insurmountable. Brains, trained brains, and a little greater pressure from necessity are needed to produce great results.

In very moderate amounts, compared with the United States as a whole, salt, lime, gypsum, and mineral waters are being produced. Of the clay products, bricks are the chief, though sewer pipe, tiles, and pottery are made in small quantities. Texas has the finest kaolin in the United States, but makes only a little stoneware, red, yellow, and Rockingham ware. Ellis County, with 100,000,000 annually, is the largest producer of brick.

The Portland cement industry began in 1904 and now amounts to more than 2,000,000 barrels annually. More and more extensive use is being made of cement in building houses and bridges. Even the ubiquitous frame house is yielding to the stucco, and there has been a much-needed epidemic in the building of sidewalks.

Beautiful building stones in immense variety and amount are to be found, but the demand is small. Various fine granites exist in practically unlimited amounts. A superior red sandstone is mined at Barstow, and excellent sandstones, marbles, and limestones occur variously. The production of asphalt as a by-product in oil refining has interfered somewhat with the use of the natural rock asphalt which occurs abundantly at Uvalde, at Montague, and a few other places. Nevertheless, Uvalde asphalt was used for paving quite recently in several cities.

Precious stones and metals are few and far between and mostly in the Trans-Pecos region. Gold occurs in the central Texas granites in small amounts. It is said that a dollar a day may be made by industriously panning the granite sands, which, strange to say, often float. Seven or eight millions of dollars of silver have come from the



OIL TANK ON FIRE AT BEAUMONT

Copyright, 1902, by F. J. Trasl



MAN-WAY, MINE NO. 5, AMERICAN LIGNITE BRIQUETTE CO., BIG LUMP, MILAM COUNTY

Courtesy of the Bureau of Economic Geology

Shafter mine near El Paso. Copper occurs in the Trans-Pecos, in the Red Beds country, and in the granite region. It has been estimated that the Red Beds alone contain two billions of dollars of copper. What little has been produced has come from Van Horn. Some zinc and lead have been taken out of Sierra Blanca, but the whole Trans-Pecos may be said to be still awaiting development.

The newest and perhaps the most interesting enterprise in Texas is the mining of sulphur by the Frasch process at Bryan Heights, near the mouth of the Brazos. The sulphur is under one of the coastal domes at a depth of a thousand feet, and is thought to exist in very large quantities. Superheated water to dissolve the sulphur is forced through pipes into the deposit. The hot water with the dissolved sulphur is then pumped back into open-air bins, where the water cools and flows away, leaving a very pure sulphur as a solid precipitate in huge blocks the size of the bins. Sulphur is mined in this way only at Bryan Heights and at Sulphur, Louisiana. More than a hundred thousand tons are produced annually. It may be found under other domes on the coast. In addition deposits in Culberson County, in the Trans-Pecos, containing 300,000 tons are said to lie at one place within forty feet of the surface of the ground.

It is obvious from what has been said that Texas is fairly well but not overabundantly supplied with minerals. It is also obvious that many of those that exist pretty abundantly are as yet being mined only on a comparatively small scale. In certain cases, with the heavy and less valuable minerals, this is due largely to the lack of a local demand. In other cases it is due to more attractive prospects or to less strin-

gent mining laws in other states. If Texas mining laws be too stringent, bearing in mind the rapid exploitation and exhaustion of our natural resources, we may view with some patience a situation that preserves something for future generations even at some cost to the present.

CHAPTER X

MANUFACTURING

“Manufactures, commerce, engineering, the building of cities, every trade carried on there and the implements of every trade,

The anvil, tongs, hammer, the axe and wedge, the square, mitre, jointer, smoothing-plane!

The plumb-bob, trowel, level, the wall-scaffold, the work of walls and ceilings, or any mason work,

The steam engine, lever, crank axle, piston shaft air pump, boiler, beam, pulley, hinge, flange, band, bolt, throttle, governors, up and down rods.”

—*Walt Whitman.*

TEXANS are prone to underestimate rather than to exaggerate the amount of manufacturing done in their state. “We are a raw, not a finished, products state”; “We do less than little old Rhode Island,” are familiar expressions based on the fact that in proportion to population Texas manufactures only about a fourth as much as the United States. Contrariwise, in the last fifteen years the “value added by manufacturing,” the difference between the value of the products in their raw and finished forms, has a little more than trebled; in the United States it has merely doubled. In 1900 Texas was doing only one-sixth of her proportion of the manufacturing of the United States; now she is doing a fourth. It is clear that manufacturing has been increasing by leaps and bounds, relatively and absolutely. This increase is certain to continue. The busy hum of factory and mill in Texas cities is destined to deepen in tone rapidly in the near future. More than

\$300,000,000 is invested in manufacturing, and this amount is growing steadily.

Naturally and properly the major manufacturing industries have been based upon those raw materials which Texas produces in such immense quantities. The cotton has given rise to gins, compresses, and cottonseed oil mills, which add about \$10,000,000 to the value of the crop. It has also occasioned a few cotton mills which add another million. Flour, rice, and grist mills depend upon the great cereals for their prosperity, adding \$6,000,000 or \$7,000,000 to the value of the wheat, corn, oats, and rice crops, while canning and preserving add a million to the fruits and vegetables. Slaughtering and meat packing add nearly \$10,000,000 to the value of the live-stock products, lumber mills about \$30,000,000 to the forest products. The refining of petroleum adds \$6,000,000 or \$8,000,000 to the value of the natural crude oils; the making of bricks, tiles, pottery, terra cotta, and other clay products adds \$3,000,000 or \$4,000,000 a year; the making of lime and salt, the cutting of marble, granite, and other stones adds another \$2,000,000. Finally, the repairing of cars and other transportation equipment in the railway shops gives about \$10,000,000 as the value annually added by manufacture to the railway rolling stock.

Summarizing and dealing in very approximate figures only, we may say that Texas' manufacturing adds \$20,000,000 a year to the value of her cultivated crops, \$10,000,000 to her live-stock products, \$30,000,000 to her lumber, \$15,000,000 to her minerals, and \$10,000,000 to her railway rolling stock. These major industries, which contribute \$85,000,000 a year

to the income of Texas, include about two-thirds of all the manufacturing that is done. The remaining one-third is parcelled out among a hundred industries, a few of which are important enough to deserve separate mention.

The power of the printing press is so great that it turns out a product in excess of \$10,000,000, the number of printing establishments is appreciably over 1,000, slightly more than one-fifth of the total number of manufacturing establishments. Dallas is second only to Nashville as a publication centre in the South. In striking contrast to the large number of printing plants are the less than twenty breweries whose beer is valued at \$6,000,000 above the materials of which it is made. Prohibitionists, disturbed at so much beer, can take comfort from the fact that no distilled spirits are made in Texas. Foundries and machine shops add more than \$5,000,000 to the materials upon which they work. The heat of the Texas summers is reflected in a net product of \$4,000,000 of ice. No other manufacturing industry, out of an almost endless variety, is at all comparable in importance to those already listed.

Nevertheless, it is interesting to know that Wichita Falls is shipping automobile trucks to England; that Fort Worth is sending well drills to South Africa and Tasmania; that Houston is making artificial legs and chill tonics and bust developers and blowpipes; that Austin is canning tamales and Red Devil chili powder; that Dallas is making bolsters and mosquito bars and spaghetti; that San Antonio is manufacturing magician supplies and surgical instruments.

Exhibit but the slightest willingness to listen to a Houston-

ian and he'll convince you that Houston is adding \$25,000,000 by manufacture to \$30,000,000 of raw products by the labor of 11,000 workers who are using 50,000 horsepower derived from fuel oil and getting \$12,000,000 a year for their work. If it's a Dallas or San Antonio or Fort Worth man that catches you, the figures will be slightly different, but the enthusiasm and the degree of truthfulness will be about the same. Manufacturing is coming along very rapidly, but cannot keep up with exuberant imaginations.

In general, Texas manufacturing is of a kind that involves only simple processes which can be conducted on a large scale mainly by machinery. As a consequence, the value of the products of the manufacturing plants is about three times the "value added by manufacture." In other words, the manufacturing processes increase the value of the raw materials about 50 per cent. In the packing-houses, the cottonseed oil mills, the flour and rice mills, the percentage added by manufacturing is quite small; in lumbering and in many of the smaller industries it is fairly large. The total value of the manufactured products does not fall far short of \$400,000,000. There are a great many printing shops, sawmills, bakeries, flour and grist mills, cottonseed oil mills, ice plants, sheet iron and tin establishments, foundries, machine shops, and creameries. These range in number from over 1,000 down to 100. All the other manufacturing industries are confined to a comparatively few plants.

Nearly two-thirds of the 6,000 manufacturing establishments employ less than six wage-earners, less than 1 per cent. employ 250 or more. Two large packeries and one

railway repair shop employ more than 1,000; less than a dozen repair shops and lumber mills employ more than 500. About a fourth of all the wage-earners are in plants employing more than 250 each, another fourth is in plants employing from 100 to 250, another fourth in plants employing from 20 to 100. The total number of wage-earners is not far from 100,000, their annual wages not far from \$50,000,000.

About 6 per cent. of the wage-earners are women, nearly 2 per cent. are under sixteen years of age. The women and children are employed mostly in the manufacture of men's clothing and cotton goods, in printing and in making confectionery and other food preparations. The percentage of women employed is less than a third, the percentage of children somewhat less than the corresponding percentages for the United States.

As should be expected, most of the manufacturing is done in the larger cities. Although the towns having populations above 10,000 have only a sixth of the people, they do over half of the manufacturing; in fact, the eight cities having populations in excess of 25,000 do very nearly one-half. Dallas and Houston each do a tenth, San Antonio and Fort Worth a fifteenth. In the four largest cities, therefore, a third of the manufacturing is done.

Dallas leads Houston somewhat in value of products, in value added by manufacture, in number of establishments, and in number of persons engaged in manufacturing; while Houston is slightly ahead in number of wage-earners and in horsepower used. So close together are these industrial cities in business, so rapidly are they growing in all directions, that their patriotic inhabitants have a fine chance,

which they use, to exalt one place at the expense of the other. The rival clamor raised by zealous Dallasites and Houstonians is further increased by noises coming from Fort Worth and San Antonio, towns whose performances and prospects afford their equally patriotic inhabitants fine material for boasting. Each of these four cities is ahead of the others in several important respects and is not backward in pointing it out. The barnyard cackle of the four big roosters is further increased by smaller crowings coming from El Paso, Galveston, Austin, Waco, Beaumont, and the rest.

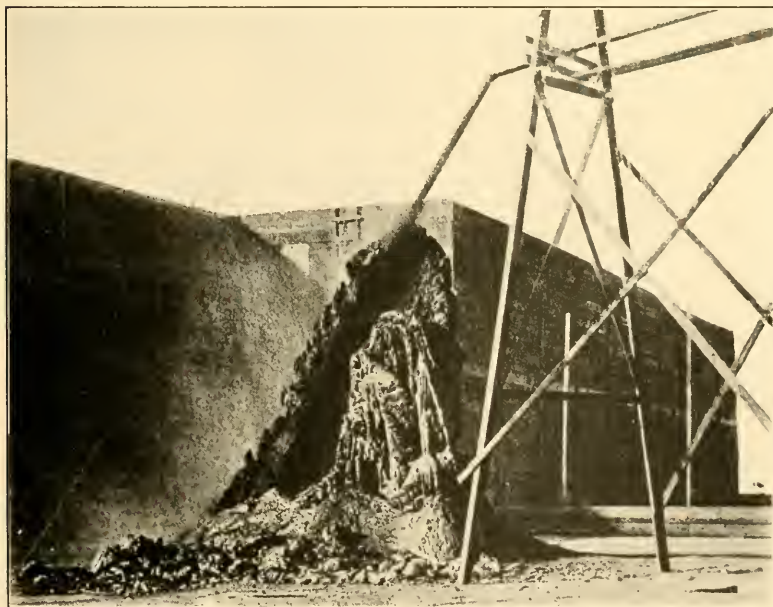
Dallas manufactures as many leather goods and drugs as all the rest of Texas. She manufactures, perhaps, more saddlery and harness than any city in the United States, and she leads the world in the manufacture of cotton-gin machinery. She does twice as much printing and bread-making as Houston, her greatest competitor. She holds other easy firsts in foundry and machine-shop products and in men's clothing. Houston is far ahead in repairing railroad rolling stock, in cottonseed and lumber products. Fort Worth has an important first in packeries, slaughtering more than all the rest of the state. San Antonio leads in beer, producing nearly as much as all the rest of Texas.

The important manufactures of Dallas are in the meat-packing, flour and grist mill, cottonseed, printing, leather and machine-shop industries. In Houston it is the cottonseed, meat-packing, rice cleaning, railroad repair shop, and breweries that are most important. In San Antonio breweries, flour mills, and cottonseed oil mills lead in order of importance. Packeries and flour mills lead in Fort Worth.



Courtesy of the Bureau of Economic Geology

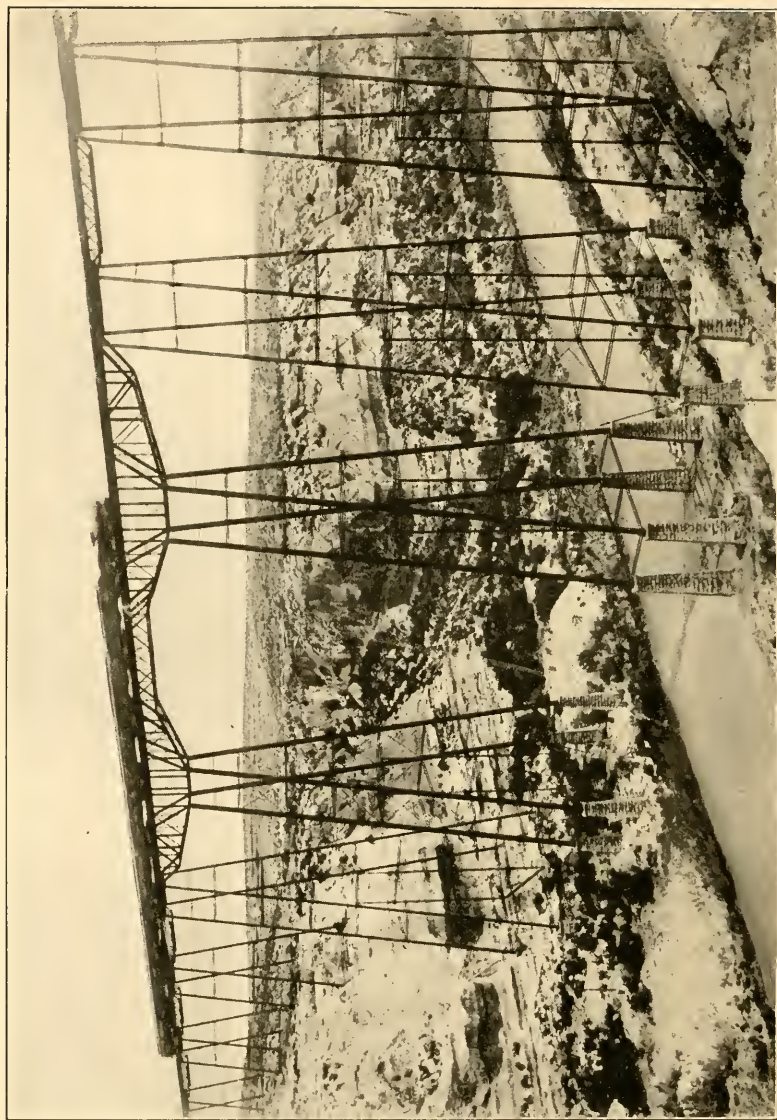
SALT BASIN, GUADALUPE MOUNTAINS IN THE DISTANCE, EL PASO COUNTY



Courtesy of the Bureau of Economic Geology

PUMPING SULPHUR OUT OF THE GROUND AT FREEPORT, NEAR THE MOUTH
OF THE BRAZOS

Blocks of sulphur 30 feet high in the background



Photograph by J. A. and S. A. Leach, Llano

PECOS HIGH BRIDGE, SOUTHERN PACIFIC RAILROAD
321 feet high, 2,280 feet long, containing 3,640,000 pounds of steel

In the smaller cities the leading manufactures follow the local raw materials. Thus at Beaumont rice milling leads; at Waco, Austin, Temple, and Paris, in the cotton belt, it is cottonseed oil production that leads; the railroad repair shops lead at such junction points as Cleburne, Denison, El Paso, Laredo, Marshall, Palestine, and Tyler.

Petroleum refining and meat packing are the two most concentrated industries in Texas and each has arisen since 1900. The discovery of petroleum in southeast Texas made one of these possible, the coming of the packeries to the cattle made the other. Together they are responsible for a substantial part of the gain which Texas has made in manufacturing in comparison with the rest of the United States. The packeries stimulated the whole live-stock business, the discovery of petroleum has had even wider consequences, affecting the fuel situation, which is one of the most serious with which Texas manufacturing has had to contend. Fuel oil is now used for manufacturing in Texas about as much as bituminous coal and lignite, all other sources of fuel or power being relatively unimportant. When the Ericson or some other solar engine is perfected, the Texas sun, rarely obscured by clouds, will make the waterfalls of the North ashamed of themselves as sources of power.

The Texas packeries are slaughtering annually about 100,000 sheep, 300,000 calves, 450,000 hogs, and 600,000 cattle, and the refineries, fed by 2,000 miles of pipe lines, are capable of refining 180,000 barrels of Texas and Oklahoma crude oil daily. Fifteen years ago these immense concerns were not in existence; now they are the biggest

manufactories in Texas, and are big enough to attract attention anywhere.

Let us now, after the tragic style, make a sad ending. Producing much wool, half of the mohair, and a third of the cotton of the United States, Texas manufactures little cotton, less wool, and no mohair into cloth. Texas manufacturing has literally obeyed the biblical precept and taken no heed of wherewithal the Texans shall be clothed. This, as Fritz Lanham of Weatherford would say, is the sad, the naked, truth.

CHAPTER XI

TRANSPORTATION

"In early days a caravan of ox wagons moved along at a very leisurely pace, depending on the grass by the way for the support of the teams. Many weeks and even months were required to deliver a cargo of cotton or buffalo hides at the market and to return with the sugar and coffee and manufactured goods required by the settlers."—*C. S. Potts.*

TEXANS regard it as a tribute to the size of their state, not a reflection on the speed of their trains, when they tell you that "one can travel all day and not get out of Texas." The 1,014 miles of track between Brownsville and Texline, the 935 between Orange and El Paso, the 586 miles between Laredo and Texarkana, are matters of state pride: "You can't ride across Texas on a two-bit ticket."

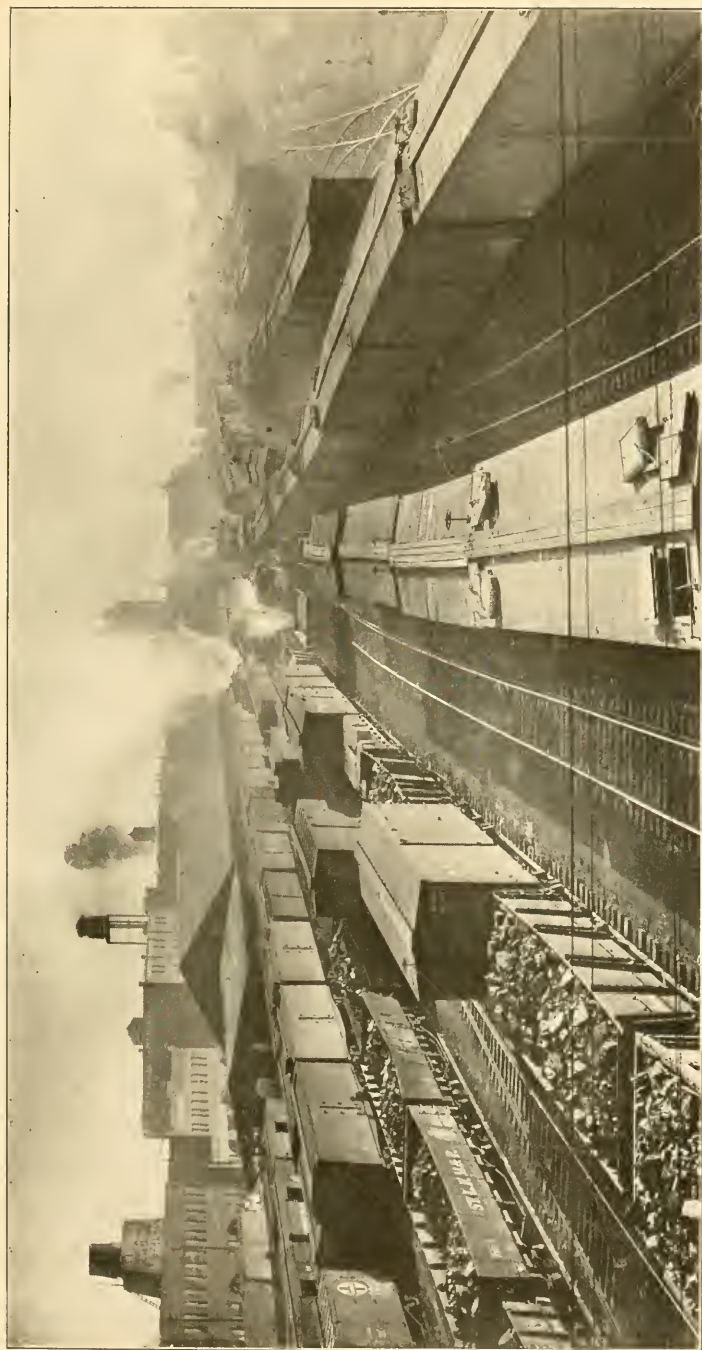
It is more than 250 miles from New Orleans to the nearest point in Texas, 300 from Memphis, 400 from St. Louis. To the Texan, Oklahoma and Arkansas exist mainly as bridges over which he may travel "East." Obviously, before the building of railways, it was a long, long way to Texas, and water transportation played a large part in moving both people and freight. There was a choice between an overland journey of 500 miles through a wilderness and a long voyage across the Gulf, followed by a shorter trip up an uncertain river.

The harbors on the Gulf and the heads of navigation on the rivers naturally became places of importance in the early days. The Red River supplied the northeastern part

of Texas with an outlet to New Orleans, traffic going by water from Jefferson. The Brazos was navigated regularly as far as Richmond, occasionally to old Washington, near Hempstead; Liberty was the ordinary head of navigation in the Trinity, and Houston was located as far up Buffalo Bayou as it was possible to take boats, while Victoria marked the end of navigation on the Guadalupe.

Neither the rivers nor the Gulf harbors were much improved until a few years before the Civil War, when several hundred thousand dollars was spent upon them, and inland navigation was at its maximum. Even in the halcyon days there was much trouble with snags and sandbars.

From the towns that enjoyed water transportation primitive roads scattered in various directions. The Republic of Texas made a few feeble efforts to build roads, but the chief thing that was done was to pass a law that the stumps in the roads should not be over twelve inches high. Stages carried passengers, ox wagons hauled freight. When railroads began to be built, their interior terminals became centres of radiating overland traffic. By 1860 there were thirty stage lines, including one from San Antonio to San Diego, California, and one from Sherman to St. Louis. Freighting, mainly with ox wagons, became the permanent occupation of some and the incidental amusement of whole neighborhoods who went to Jefferson or Houston with cotton, to come back loaded with other necessities. For a long time the fertile Black Prairie country, whose dirt roads are so unpassable when wet, was left undeveloped agriculturally because of the lack of transportation. Freight cost 20 cents per mile per ton, just twenty



A PORTION OF THE TEXAS AND PACIFIC TRACKS AT FORT WORTH



HAULING WOOL TO KERRVILLE

GALVESTON CAUSEWAY

Cost over two million dollars; partly washed away in the storm of 1915

OIL AND LUMBER GOING OUT AT PORT ARTHUR

times the present average railroad rate. The richest counties in early days were those near water routes and the chief towns were ports. In 1839 Dr. Anson Jones, afterward President of Texas, congratulated the Galvestonians upon their large city, which, "like Venice the bride of the Adriatic, has arisen as if by enchantment from the waters. . . . Your population, which already amounts to near three thousand, is rapidly and constantly increasing."

Jefferson, on the Red River, in 1870, had 12,000 people, as many as San Antonio, not many less than Galveston, and more than Houston. Fort Worth was then unknown, and Dallas had 500 people. But the railroads passed Jefferson by, and in 1880 the population had decreased one-half, sinking later to 2,000. It has been only recently that Jefferson has begun to repair her shattered fortunes. Other towns, prospering as terminals of railroads for a long time, have had their growth retarded and even their populations reduced by the railroad "going on." A few towns have entirely disappeared from the map. Millican, long a prosperous terminus of the Houston & Texas Central Railroad, now contains only a few business houses and a blacksmith shop. Somebody ought to write the story of the Texas towns that have died or seen better days. There is a pathos about these modern Palmyras which often struggled to resist their fate. Jefferson, for example, actually built a narrow gauge west to McKinney in a vain attempt to restore her prosperity.

Loss did not always follow, however, when a railroad built on beyond a town that had been its terminal. A financial panic that stopped the Texas & Pacific at Fort

Worth made that place a city. "Pshaw," said the Dallases, then about a thousand in number, observing the growth of what was to be a rival town, "when the T. & P. goes on west, Fort Worth won't even be a whistling station." These gibes inspired the rapidly increasing Fort Worthians to great efforts. They got another railroad, they built a wholesale house or two, they roped and caught everything in sight, until, finally, when the T. & P. did go on west, Fort Worth didn't miss her lost terminal.

In 1836 the Republic of Texas chartered a tremendous company (on paper) to build railroads, dig canals, and establish banking facilities. This hydraheaded "devouring monster," as its opponents called it, never came to anything. Other companies also did nothing, until some grading was done, and some ties were bought in 1840 for the Harrisburg & Brazos Railroad. Nothing further came of this until 1851, when more grading was done. The first rails were laid in 1852; the completion of twenty miles was celebrated by a barbecue in 1853. The first locomotive to run over the track of the first Texas railway, the Buffalo Bayou, Brazos & Colorado, was called the "General Sherman." It was the second locomotive to raise steam west of the Mississippi.

The second Texas railroad was the Galveston & Red River, which was chartered in 1848 and began building in 1853. It had only two miles of track when the first engine was put on in 1856, at which time its name was changed to the Houston & Texas Central, the name it still bears. From Houston this road extended to Millican, where it stopped till 1867. The third railroad was built from Vir-

ginia Point to Houston in 1854 and 1855, the bridge across Galveston Bay not being finished until 1860. The fourth railway was built to connect Houston with the B. B. B. & C. The fifth railway was built in 1857 to 1860 across the twenty-one miles between Hempstead and Brenham.

The Texas & New Orleans started in 1858 and had reached Orange on the Sabine in 1861. Twenty-five miles on a Sabine Pass-Beaumont-Henderson road were graded between 1857 and 1861. From Port Lavaca in 1861 a road was built twenty-eight miles to Victoria. From Indianola a rival line started for Austin, but never got farther than fifteen miles from the coast. Even these fifteen miles of track were washed away in the 1874 hurricane and were never rebuilt. To complete the list of antebellum railroads mention may be made of the two that started west from Texarkana and Marshall, one in 1857, the other in 1856.

Before the Civil War thousands of miles of railroads were chartered, but only 492 miles were built. Early railway building was beset with difficulties, chief of which was to raise the money. The various towns on the lines gave bonuses, the state gave sixteen sections of land, and loaned \$6,000 of school fund money for every mile of track laid down. The land was often sold for 20 cents an acre. The public put up most of the money for the early railways, the promoters furnished most of the energy. A railway fossil of the sixties is an old law requiring trains to stop at least five minutes at each and every station.

The Civil War ruined these early railroads, two being utterly destroyed. With one exception, railroad building

did not begin again until 1870. The H. & T. C., alone among all the roads, recovered shortly after the war was over and built from Millican to Bryan in 1867, to Calvert in 1868, and on to Denison in 1873.

The first railroad connection to the north and east was established in 1873 by the H. & T. C. meeting at Denison, the Katy, which had reached there the previous year. The Iron Mountain from St. Louis to Texarkana, connecting with the T. & P., formed the second railway to and from Texas. In 1880 the Texas & New Orleans was finished to New Orleans from Houston, the Southern Pacific from California to El Paso, and the railway system of Texas became an integral part of the continental network. It was not till 1883 that the New Orleans to San Francisco lines were completed for through traffic.

The railroad net, thus slowly and painfully begun, spread with great rapidity after 1870. In 1875 there were 1,700 miles in operation; 6,700 in 1885; 9,300 in 1895; 11,700 in 1905; 16,000 in 1915, not counting 4,500 miles of side track. Texas builds on an average more than a mile of track per day. In 1881, 1,700 miles, in 1882, 1,100 miles, were built. It was in those booming days of the early eighties that a Texas mayor is said to have telegraphed to an Eastern colleague: "Weatherford is now linked with bands of steel to New York," only to get the ungeographical reply from the mayor of little old New York, "Where in hell is Weatherford?" Texas now has the largest mileage of any of the states, three or four thousand more than either Illinois or Pennsylvania. The roadbeds, rolling stock, and stations are being brought up to higher and higher standards,

more and longer and faster passenger and freight trains are running. Cannon ball, limited flyer, and de luxe trains abound. For example, two twenty-four-hour trains run from Austin to St. Louis. Trains are still behind time often enough to give a basis for much grumbling and for much miscellaneous conversation on station platforms. Such is not the case in the prairie country; it is not necessary for the traveller to start to catch the train until a half-hour after the headlight is first visible.

Texas has about half again as much mileage per inhabitant as the United States, but only two-thirds as much in proportion to area. The main railroad belt is southward over the Black Prairie through Dallas and Fort Worth to Houston and Galveston. The Southern Pacific and Texas Pacific, diverging in a large V eastward from El Paso, cross the state to Orange on the southeastern corner, to Texarkana on the northeastern. Southward and southwestward run a great number of trunk lines into Texas. The Brownsville Line reaches to the mouth of the Rio Grande, the International connects with the Mexican National lines at Laredo, the Orient has nearly filled the small gap in its line between Kansas City and Chihuahua. The Cotton Belt, the Frisco, the Rock Island and Santa Fé enter the northern parts of the state from the northeast. The Santa Fé, the Katy, the Houston & Texas Central traverse the heart of Texas from the Red River to the Gulf, one Katy terminal being San Antonio. Southeastward from New Mexico and Colorado comes the Santa Fé right through to Galveston; the Denver and the Brazos Valley together make a trunk line that does likewise. Southward

also runs the International from Fort Worth to Houston, the Southern Pacific from Dallas to Beaumont, the Kansas City Southern to Port Arthur. A hundred shorter lines tie various places together.

The roads running south and southeastward to the Gulf have largely followed the general slope of the country, the general course of the rivers, and "have a downhill pull" most of the way to the ports. Even those roads whose courses are northward and eastward across the rivers are not disturbed by grades, because the river valleys are not deeply cut. Moreover, the ascent to the northwest is so gradual that 4,000 feet above the sea is reached without any conspicuous grades. Consequently, there are no "loops" for the tourists to gaze at, and there is only one tunnel and that is on a "tap," to Fredericksburg. Fine mountain scenery from the car windows is scarce; there is only a bridge or two now and then, the one across the Pecos Cañon on the Southern Pacific being 321 feet above low water.

Baedeker devotes to Texas less than eight of his 600 pages about the United States. He double stars nothing, and of natural scenery he stars only Galveston Beach, which can't be seen from a railroad. At Paisano he says that one can see some fine mountains, that the Castle Rocks are worth seeing at Devil's River, that west of Fort Worth is "an interminable cattle country." No wonder that Texans travel by night and the Pullman Company flourishes. As a compensation, two engines are not needed to pull a loaded box car over a mountain. The scenery is not very fine for tourists, but the low railroad grades are mighty nice for freight, which outgoing flows mainly southeastward to the

Gulf and northeastward to Kansas City, St. Louis, and beyond.

From the point of view of the Texas hinterland there are only four kinds of towns: "wet" towns and "dry" towns, those "on" and those "off" railroads. The increased value of land, the increased number of people, the increased facilities that follow the first coming of the railroad into a region, are so obvious that the Texas people have always been very liberal in donating aid to railway construction. On the other hand, the failure of the railroads when built to fulfil too extravagant local hopes (which went so far sometimes as to imagine that the climate would be changed by the puffing of the engines), the sometimes supposedly excessive freight rates, and the frequently fraudulent schemes of overly sharp railway promoters, have helped to produce in the public mind a general and deep-seated prejudice against railroads and other corporations, out of which have grown legitimate railway regulation and a partly illegitimate "damage suit industry." It is the old Aristophanic women trouble over again. When a town didn't have a railroad, it wanted one; when it got the railroad it began to "cuss" the management.

But the advantages of having railroads are so obvious that every one did what was possible to help build them. An appreciable fraction of the cost of construction was contributed by private individuals in money, bonuses, and rights of way. Before the Constitution of 1876 prohibited the practice, about \$1,500,000 was contributed by counties and towns which sold bonds to raise the money. Nearly \$2,000,000 of school fund money was loaned the

antebellum railroads, \$6,000 to a mile. Some of this was paid back, but some was forever lost to the school fund. No state bonds were ever issued to raise railway subsidies, because, after the legislature in 1870 had authorized such bonds, Comptroller A. Bledsoe refused to approve those sent him in 1871, and was sustained by the Supreme Court in his refusal. During the land-grant period of 1852-1882, one-seventh of Texas—25,000,000 acres—was given by the state to the railroads. Sixteen sections, more than 10,000 acres, for each mile of track constructed, was the ordinary state-land bonus. By 1882 the state had planned to give away three or four times as much public land as it had, and had actually given away about 10,000,000 acres more than it had. Forfeitures, however, brought the donations within the limits of the actual land. No wonder the giving of lands ended in 1882: "No birds were flying overhead, there were no birds to fly."

There has been much argument concerning the land-grant era. Some say the state practically built the railways by giving 10,000 acres per mile. Others say that there was only a slow sale for the land at 25 cents an acre, that the railroads had to survey both their land and the school lands, that surveyors often demanded half of the land for locating the other half. The giving of so much land to the railroads undoubtedly brought the railroads sooner, and the labors of their immigration agents caused population to flow in rapidly. The cities built to the railroads, not the railroads to the cities. The railroads were required to get rid of their lands within a certain interval, but this law caused the lands often to fall under the control of a

subsidiary company which both prevented actual settlement and made large private profits for its stockholders. Says Professor Potts, whose history of Texas railways we have been following, summarizing the results of the land-grant era: "In spite of abuses on the part of the railways and of reckless generosity on the part of the people . . . Texas may fairly be congratulated on the results of the public aid she extended to railway construction."

Despite a good deal of legislation intended to prevent it, the railroads have naturally gravitated into large systems to a considerable extent. These are but parts of larger systems outside. Three systems include more than half the Texas railroads and four do nearly two-thirds of the railroad business.

The Southern Pacific system, based upon the Orange-El Paso and Houston to Denison main lines, has spread a network of railroads, chiefly in south and east Texas, which aggregate more than 3,000 miles and carry a fourth of the Texas tonnage. The Gould system has for its basis the Texas & Pacific and the International & Great Northern, which diverges from Texarkana to El Paso and to Laredo in an enormous V. Across the wings of this V runs the Fort Worth-Houston line, which almost changes the V to an A. The Gould system also has a mileage in excess of 3,000 and carries a fifth of the state tonnage. The main line of the Sante Fé starts at Galveston and forms a Y at Temple. One prong extends through Fort Worth toward the north, the other northwestward to the main Chicago-California line in New Mexico. Shorter taps extend to various towns, notably Dallas and Beaumont and San

Angelo. The total Sante Fé mileage is above 2,000, this road carrying one-tenth of the tonnage. The Katy system includes about 1,500 miles; after entering the state from St. Louis and Chicago at Denison, the main line divides at Whitesboro, to pass through Fort Worth and Dallas, and reunites at Hillsboro, only to divide again at Granger to reach San Antonio on one prong, Houston and Galveston on the other. More than any other line the Katy runs lengthwise across the Black Prairie, the heart of Texas. The Katy carries a little above one-tenth of the Texas tonnage.

In fixing the value of all the railroads in Texas there is no lack of expert advice; on the contrary, there is an excess of experts, all disagreeing. The assessed valuation of the physical railways is \$180,000,000, and their "intangible assets" or value in addition to their mere physical value are fixed by the state at \$170,000,000. Hence what may be called the total assessed value of the Texas railways is \$350,000,000. The State Railroad Commission's value for the physical railways is \$400,000,000. The stocks, bonds, and current indebtedness of the railways total nearly \$600,000,000. The railroad managements report the roads as costing nearly \$650,000,000, which amount, says the Texas Railroad Commission, does "not represent the actual expenditures for grading, ties, rails, and other materials and labor. Sometimes whole series of income bonds were issued simultaneously with the mortgage bonds. . . ." Mr. R. A. Thompson, formerly expert engineer of the Railroad Commission, now a member of the Board of Valuation of the Interstate Commerce Commission, has expressed

the opinion at an official hearing that the physical property of the Texas roads is worth \$500,000,000. The United States Census estimate is slightly in excess of *one thousand millions*! Between these extreme values is a disagreement of more than \$600,000,000. When doctors disagree, the patient often dies. The Texas railways claim to be very sick and are affected with a lassitude so profound that they seem to be able to produce only very small dividends at very long intervals. The railroads, according to their own reports, do not pay a 1 per cent. dividend on even the smallest of the above valuations.

The income from passengers, mail, and express is \$35,000,000, from freight \$75,000,000, a total of \$110,000,000. The mere moving of trains costs the roads \$48,000,000, maintenance and other expenses amount to \$42,000,000, making a total expense account of \$90,000,000 and giving a "net profit from operation" of \$20,000,000. Taxes, hire of rolling stock, miscellaneous expenses, and interest on funded debts amount to \$28,000,000, leaving the railroads with a pleasant little deficit of several millions a year. No wonder that a Texas railroad dividend has, in addition to its mere cash value, an intangible value due its rarity. Plutocrats in place of cashing dividend checks may keep them as souvenirs. Some say that the rarity of these dividends is due to real poverty, while others contend that it is due to very skilful bookkeeping on the part of the railway managers.

A few averages may here be set down for the edification of the serious minded. On the average, the Texas railways are carrying annually 25,000,000 passengers fifty miles

each, using tickets costing \$1.20 apiece on passenger trains earning \$1.15 per mile by hauling five cars containing forty-five people. The roads are also carrying annually, on the average, nearly 60,000,000 tons of freight a distance of 125 miles at a cent a mile per ton on freight trains earning \$2.70 per mile by hauling seven empty cars along with sixteen cars loaded to fifteen tons each.

The revenue yielding freight runs about as follows: lumber and other forest products, 20 per cent.; coal, coke, and lignite, 13 per cent.; grains, flour, etc., 9 per cent.; cotton and by-products, 8 per cent.; stone and sand, 7 per cent.; petroleum and oils, 6 per cent.; live stock and products, 5 per cent.; fruits, vegetables, and melons, 5 per cent.

The export tonnage of the Gulf ports is several times as great as the import, and, as a consequence, much more freight comes by the railways into Texas than goes out. More than half the freight tonnage is interstate.

In the last quarter of a century freight earnings have increased 55 per cent., gross earnings 65 per cent., operating expenses 70 per cent., income from operation 70 per cent., mileage 100 per cent. Although freight rates have decreased about 25 per cent., the earnings per mile of freight trains have increased 80 per cent., proof positive that a Texas freight train is carrying twice as much freight as it did in 1890.

There are nearly 70,000 people employed in running the railways of Texas. The Santa Fé and the Katy each employ about 7,000, while the Gould lines employ 12,000, and the Southern Pacific 15,000. Several of the 5,000 lawyers

in Texas also derive their sustenance from the railways. In spite of the efforts of railway attorneys, generous juries award damages against the roads to the extent of two millions annually for freight, half a million for live stock on the right of way, and two and a half millions for personal injuries.

Small freight shipments are now being made fairly rapidly by means of "package cars," which are for freight what a mail sack is for mail. For example, 300 of these cars per day go out from Fort Worth and Dallas, to the neighboring towns, the freight for each town having been "assembled" beforehand. The Wells-Fargo is the leading express company, running on two-thirds of the railway mileage.

Competition is said to be the life of trade, but neither the railroads nor the small towns are altogether enjoying the spread of the interurban electrics, which threaten to take passengers from the one and customers from the other. From Dallas as a centre radiate five lines, from Fort Worth three, while four other lines connect eight other cities, chief of which are Houston and Galveston. To the 500 miles of interurban electrics should be added 100 miles of gasoline interurbans, 65 miles of which are on the lower Rio Grande out of San Benito.

A thousand or more electric street cars run on 600 miles of track in forty towns. Their owners are greatly disturbed by the jitneys which have suddenly appeared by dozens and hundreds. What will be the result of the jitney vs. street-car controversy no man can now tell, not even the lawyers nor the city commissioners.

"Good roads" is a Texas slogan, for there is a tremendous need of them. Education, marketing, progress in many directions depends upon them. The "split-log drag" has become an institution; the "sand-clay" road has attained in east Texas the importance of a political issue; in fact, all the roads are nurseries of citizenship. Many a Texan has acquired his political education by listening to the wiseacres while sitting on a cracker-box at the store or working the neighborhood road with the neighbors. Gravel in the interior, shell along the coast, natural dirt nearly everywhere, are the road materials. Alas! of the 150,000 miles of roads only 5,000 are classed as "surfaced," although from seven to ten million dollars a year is spent upon roads and bridges. The climate makes maintenance difficult. During a long dry spell the steel tires cut the road; the winds and the 80,000 Texas-owned motor cars scatter the resulting dust all over the landscape. Then a torrential rain will carry away much of what is left. The Texas petroleum products do not contain enough asphalt to mix with this dust of the roads and bind it into a solid mass. The Texas oils make greasy roads, the California oils make nearly asphalt streets. In the cities asphalt on a concrete base is being extensively used, and there is much natural asphalt in Uvalde and Montague counties which is sure to be used in road building.

Between the long islands that line the 400 miles of Texas coast are sandy connecting reefs that obstruct navigation between the Gulf and the somewhat deeper bays back of the island. Millions of dollars has been spent in dredging channels through and to these shallow bays. Other mil-

lions of dollars has been profitably spent, chiefly by the United States, in building jetties that so confine the currents caused by the small Gulf tides as to force them to cut channels across the bars. The Galveston jetties extend eight miles to sea and give a minimum depth of channel of thirty feet. Much dredging has also been done to maintain channels in the bays and rivers. Thus from the Galveston harbor extend channels to Texas City and Port Bolivar, which are officially parts of the port of Galveston. From the Galveston harbor also extends the ship channel up Buffalo Bayou to Houston. Next in importance to the Galveston-Houston harbor improvements are those at Sabine Lake connecting Sabine Pass, Port Arthur, Beaumont, and Orange. Shallower channels are being maintained or dug at Corpus Christi, Aransas Pass, and a few other places. A heron that lit in the middle of the bay and calmly waded about while some investors were being told about deep water is said to have reduced in 1890 by 100 per cent. the price of lots in Aransas Pass.

Galveston is one of the fifteen biggest ports in the world. In total exports and imports she ranks with Manchester, Glasgow, Southampton, Genoa, Trieste, New Orleans, and Montreal. She is beating the two last named for second place among American ports. Her high position is due, however, almost exclusively to cotton, which accounts for more than \$250,000,000 of her \$300,000,000 exports. The imports are less than \$15,000,000; the imports and incoming coastwise freight together are far less than the exports and outgoing coastwise freight, and, as a result, the 200,000 loaded cars that go annually into Galveston fre-

quently come back unloaded. Another result of this one-way arrangement is the coming into Texas by rail of many more loaded cars than go out. Apparently this business of hauling empty freight cars so extensively, on the average one "empty" to two "fulls," ought to be discouraged as much as possible by allowing the Texas railroads to make very low freight rates from Galveston to the interior.

The Port Arthur exports amount to \$50,000,000 and consist chiefly of lumber and oil, though rice, sulphur, and various other items contribute to the total. At Beaumont it is not polite to make comparisons between the Galveston and Port Arthur channels, nor is it proper to think of the Neches River as inferior to the Mississippi in depth or breadth.

The Houston Ship Channel, down which now go some 3,000,000 tons of freight, and down which, to hear a Houstonian tell it, the entire commerce of the world is soon to go, appears quite differently according to which end of it you view. Approaching it from the Galveston end it is relatively unimportant, approaching it from the Houston end it is "the place where seventeen railroads meet the sea." Coming from the inland into Houston you find that a part of the noise you thought was due to manufacturing and trade arises from proud talk about the Channel and *the* "Turning Basin," "from which," said a Houstonian at a banquet, "ocean-going vessels will be able to take cargoes of Houston products directly through the Panama Canal to the great ports of Brazil and Argentina!" Speaking seriously, the ship channel, "long a cherished dream," will be of some service to commerce in general and of great service to Houston in particular. The city has agreed to



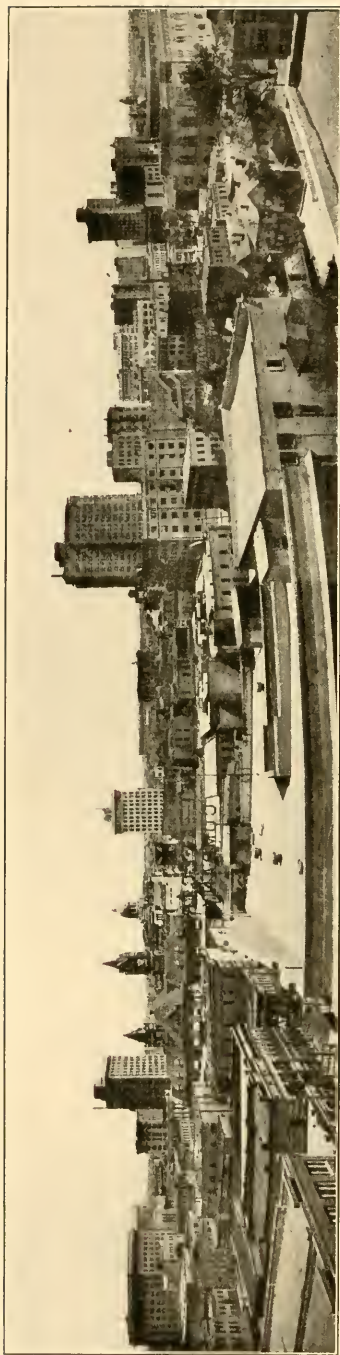
A PARTIAL VIEW OF FORT WORTH



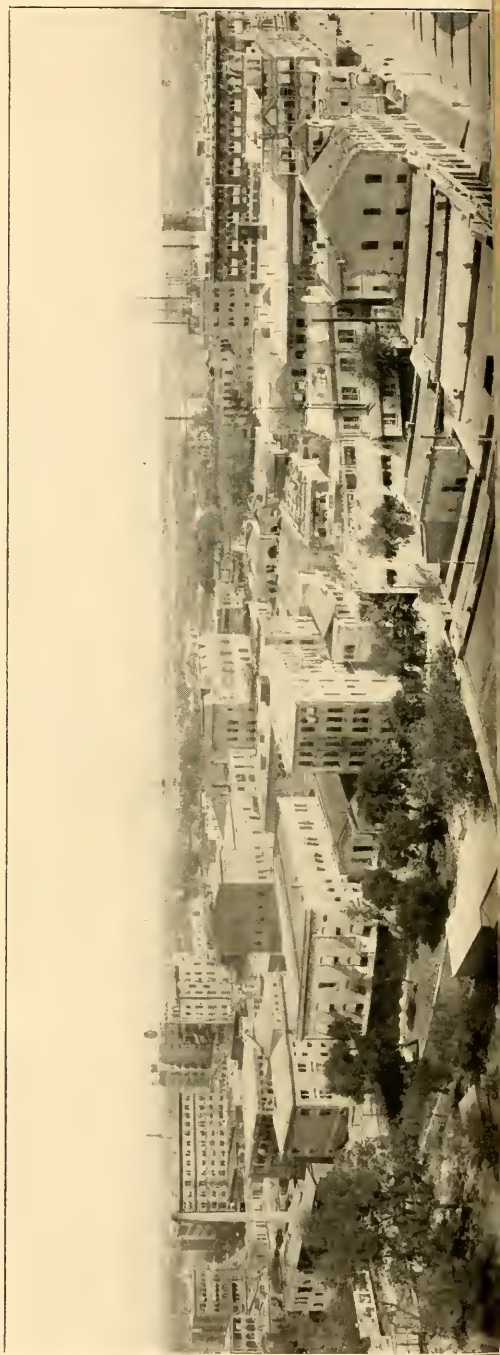
Courtesy of the Dallas News

VIEW IN BUSINESS SECTION OF DALLAS

Looking east from Lamar Street on Main



PANORAMIC VIEW OF DOWNTOWN SECTION OF HOUSTON
Which has more skyscrapers than any city of equal population in the world



maintain free wharves in return for the United States keeping the channel open. Large plants are now clustering as thickly along the ship channel as flies around a streak of molasses. May they be built of concrete so that no bubonic rat may find a place therein.

Speaking of the Panama Canal reminds us of the fact that, varying inversely as the distance from the coast, Texans are prone to exaggerate its importance, important to Texas as it doubtless is to be. Maps of the United States are drawn showing a hundred railroad lines converging from Salt Lake and Chicago to the Texas coast. Sometimes a funnel is pictured sucking all the Middle West through the Houston-Galveston nozzle, from which steamship lines diverge to every point known to geographers, each point nearer by 300 miles to Texas than it is to New York. All this is very fine, and many prospects will be realized, but not all of them. When a distinguished gentleman from Spain was invited to lecture at the Rice Institute at Houston sundry wiseacres thought it a sapient bid for South American trade. Perhaps they located Spain somewhere south of us; perhaps they exaggerated the tie that binds Old Spain to the New.

Both pessimistic and optimistic anticipations are often at fault. Thus, Judge John B. Jones in 1850 opposed the building of a railroad out of Houston on the ground that all the trade and travel in Texas would not support one line, while an enthusiast, writing in the *Texas Almanac* for 1873, predicted that the completion of the Southern & Texas Pacific to California would "cause the mighty commerce of India, China, and Japan to flow through Galveston."

Pending Panama Canal developments Texas is building an intercoastal canal with the help of Uncle Sam's pocket-book. The idea is to have a canal from the mouth of the Rio Grande around the Gulf Coast. Whether traffic on the canal could flourish in competition with the railroads on the land and the ocean boats on the Gulf is a matter of speculation. However this may be it is now possible to go from Corpus Christi to Galveston by water without being exposed to the Gulf.

Texas rivers are getting larger and larger amounts of money in the biennial pork barrel distribution that takes place in Washington. Texas Congressman, like other Congressmen, have labored in season and out of season to secure appropriations for their districts and are succeeding better now that Texas is populous. Dallas has been particularly insistent on navigating the Trinity; some \$2,000,000 has already been spent on surveys and on putting in a system of locks from Dallas down the river. Inspired by the possibility of small boats ascending the Trinity, Waco yearns to navigate the Brazos, and Austin is meditating on asking Congress to make the Colorado navigable. Pulling logs out of Red River has long been one of Uncle Sam's amusements, but whether the money expended on the upper parts of the Texas rivers will ever pay interest in the form of cheap transportation is a question whose answer is probably negative. In flood time a big boat can go a long way up a Texas river, but if it waits too long for its return trip it will take another flood, not a Congressional appropriation, to get it back to sea again.

CHAPTER XII

THE TRADE OF THE CITIES

"Everytown has 25 per cent. more population than the latest census indicates. For years unfortunate schisms have impeded the progress of Everytown: the rivalry between the two leading banks, the municipal politics feud, and worst of all the split on the prohibition question. Everytown is the worst place on earth for gossip, and the servant problem is simply awful. If Everytown ever expects to amount to anything it will have to poison the old fossils who are now in control."—*John E. Rosser of Dallas, in "Life."*

THE real estate man, the secretary of the Commercial Club, and the drummer are abroad in the land. The Business Men's Association and the Advertising Club depart on the trade excursions to astonish and attract the neighboring towns with the gorgeousness of their booster banners and the cheapness of their wares. Advertising has become both a business and an art and flourishes along the channels of trade as cuckle-burs along the banks of creeks.

The printed matter got out by ambitious municipalities anxious to attract population and money exhibits both monotony and variety. Sixty towns, yes, six hundred towns, in Texas are "strategically situated." A hundred towns "have recently built a \$50,000 hotel, a \$12,000 ice plant, a \$60,000 schoolhouse, and a \$35,000 opera house." A dozen towns have just constructed a Masonic Temple or a cotton-oil mill or a something else. Each town is more happily situated than Nacogdoches, which, according to Governor Roberts, was merely "in the centre of the surrounding country"; all the other towns are in the centre

of an "unsurpassed country." Nacogdoches too has easily moved to the heart of the unsurpassed by merely starting a Business Men's Association and employing a live secretary. If a town isn't a centre, it's a "gateway." Around every town the soil is of "inexhaustible fertility," varying from "best black waxy" through "rich hog-wallow" to "deep sandy loam." Often the XYZ Syndicate, realizing the enormous advantages of the region, has invested one or two or three millions in a ranch, or an irrigation project, or a colonization scheme. Always the land has gone from 50 cents an acre to \$50 an acre, and the wells or the river invariably furnish an unlimited supply of water. Whatever the number of railroads, more are always coming immediately.

Words failing, pictures are used by the boosters. The bank, the railroad station, the home of the leading citizen, and the main street invariably appear, accompanied by huge beets and watermelons and men on horseback lost in tall Kaffir corn or sugar-cane. Occasionally, imitating California, a picture is made of a cement hotel, a climbing vine, and a geranium. If the town is in northwest Texas, it is "above quarantine"; if in south Texas, it is a "winter playground." If anywhere, the industrious are attracted and the lazy repelled by a statement concerning the possibility of working all year uninterrupted by the "cold winters of the North, where stock have to be housed and fed." The profit to be derived from raising high-priced early vegetables is never left out, and the "If I were a young man I'd pack my grip and come to Texas" of James Wilson, for so long a time Secretary of Agriculture of the United States, is quoted by all the boosters who happen to have

heard of the remark. If it is a railroad circular that you are looking at, you are sure to be told that "along our lines are to be found some of the most fertile and attractive parts of Texas," each crammed with opportunities and yearning for new people. To cap it all, the bigness of Texas is used as a clinching argument. The spirit of Colonel Sellers, thank Heaven, is still with us, and fond hope still drags us from sunny to-day into the far more golden to-morrow.

Curiously enough, a lot of this stuff is true. The following specific statements are doubtless all true unless what is somewhat exceptional be mistaken for the average: "\$62 on okra from one-sixteenth of an acre"; "\$424.40 on water-melons from three and a half acres"; "\$361.25 on blackberries from one and one-fourth acres"; "an average of 390 crates of tomatoes to an acre"; "the Haupt blackberry has paid over \$1,000 an acre in this county and a failure is unknown"; "\$1,097 from two acres of strawberries"; "one-eighth of an acre of snap beans netted \$135"; "200 bushels of Irish potatoes in the spring, 300 bushels of Bradley yams in the fall, raised on the same acre, netting over \$500," and so on ad infinitum.

There are other varieties of talk. "Matagordo County is a paradise for hunters and fishermen"; "Harris County has more good roads than any state in the old South"; "Why go to southern California when the Plains Country is better?" "Cooke County came first by capturing forty-three first prizes at the State Fair"; "For health, for prosperity, for society, Childress is without a peer"; "Man wants no more than he can get at Memphis"; "Biggest gas well in the world at Henrietta, where pure petroleum

pours plentifully and people's purses protrude plethorically"; "Brady is the live wire of the Central West"; "Mineral Wells is the wonder city of Texas"; "Honey Grove is the garden spot of Fannin County"; "Wills Point is first in prairie hay"; "You are not on the right trail unless you are headed for Menard"; "Clarksville raises the 30-cent, long staple cotton"; "Stamford, nine years old, population seven thousand"; "More than one thousand happy, ruddy-faced children in our four two-story stone schoolhouses"; "Lufkin is the home of the most famous Hoo Hoo band"; "McLennan County soil was awarded the gold prize at the French Universal Exposition against specimens from the valleys of the Nile, Amazon, Danube, and Ganges as superior to all others for general agricultural purposes"; "Travis County has the largest spinach farm in the world"; "McKinney manufactures the only colored cotton goods in the Southwest"; "Temple's Tickle Chicle is a peerless chewing gum"; "The Round Rock Broom Company won the gold medal at the World's Fair."

Impatient at these somewhat petty details concerning communities, each anxious to grow more rapidly than its neighbors, the discriminating reader will not fail to use these straws to determine which way the wind is blowing. It is no breeze, but a gale, that is sending all Texas forward to greater material wealth and a loftier civilization. A single improvement in a little town, too much magnified by local pride, may produce unsympathetic smiles, but a hundred improvements in each of five hundred towns demand respect. They are the drum-beats of an advancing people.

The wholesale and retail trade of the larger distributing

centres is big enough to command very respectful attention. It is impossible to get exact and difficult to get approximate statistics. The state makes no effort to compile complete data relating to trade, and the compilation is too difficult for the local chambers of commerce. It appears, however, that the wholesale trade of Dallas is close to \$200,000,000 a year, that the wholesale trade of Houston, Fort Worth, and San Antonio is well above \$100,000,000 each. The primacy of Dallas is asserted, subject to correction by and in fear of the statisticians of the three other cities. Let us here translate into round numbers a part of what the enterprising cities of Texas have to say for themselves.

Dallas is the "village of yesterday, the city of to-day, the metropolis of to-morrow." Building permits are running eight and a half millions a year; the 200,000 Club is working on full time; 500,000 people can reach Dallas in two hours' ride or less; nearly two million people live within a hundred miles, more than within a hundred miles of Kansas City or St. Louis; nine railroads radiate in thirteen directions, and five interurbans centre in Dallas; the express business per capita is first in the United States. Dallas is the largest inland spot cotton market in the world, and the State Fair of Texas at Dallas is the largest of all the state fairs, with 700,000 visitors annually. Dallas is seventh in the United States as a telegraph centre and is second in the world in the sale of agricultural implements; she sells farming machinery to the average value of \$100,000 a day. Post-office receipts are in excess of a million dollars, while wholesale houses number 318, factories nearly 400.

Houston, at the head of navigation on Buffalo Bayou,

started in early days because the Harris family that founded Harrisburg, and the Allens who founded Houston, could not agree on a trade that would have concentrated their energies on Harrisburg. Houston has more skyscrapers than any city of its size, and in number of automobiles is second only to Los Angeles; is the largest inland cotton port market in the world, 3,000,000 bales annually; has free wharfage, enormous storage and immense compresses. Houston is the lumber and oil centre of the southwest. The annual lumber trade is beyond \$40,000,000, nearly a third of the total wholesale trade. The Kirby and the Chicago lumber companies, the Texas, the Gulf, and the Magnolia oil companies are enormous concerns with headquarters at Houston. One-tenth of the railroad employees of Texas centre at Houston. In banking Houston is ahead of both Dallas and New Orleans in deposits per capita and in several other items. The retail trade is in the neighborhood of \$60,000,000. Forty artesian wells furnish an abundant supply of pure water, and the Chamber of Commerce is the oldest in Texas, dating from 1840.

For years Dallas has been expecting to get ahead of San Antonio in population, and Houston has been expecting to catch Dallas. Except in 1890, when Dallas was reported a few hundred ahead, San Antonio has managed to remain the largest city in Texas. Historically by far the most interesting of the Texas cities, San Antonio has evolved from an old Spanish mission into a large modern commercial centre without losing all of the flavor of its past. A distributing centre for a vast and rapidly developing area, a resort where tourists winter by the thousands, the Mecca of

the south Texas cow and sheep men, San Antonio does a wholesale and retail trade that keeps her the biggest city in Texas. Her trade is of a miscellaneous character, not very especially marked along certain lines, as is the trade of Dallas, of Fort Worth, of Houston, and of El Paso.

After listing the commercial glories of her rivals, what remains for Fort Worth? Many things. Listen! Fort Worth has more railroads than any town in Texas, and hence has one-line rates to more places; she is the largest distributor of groceries in Texas, and claims the second largest wholesale grocery in the United States and the largest wholesale liquor house in the Southwest; she is the third largest horse and mule market in the world, and the third largest live-stock and packing centre in the United States; she receives nearly 2,000,000 head of cattle, calves, hogs, and sheep, and inhospitably slaughters over half of what she receives. Her cold-storage capacity naturally exceeds that of all the rest of the Texas cities. She is the grain centre of the Southwest, having eighteen elevators with a capacity of 3,000,000 bushels. Fort Worth is an oil centre and the rendezvous of north and northwest Texas cowmen; she is the headquarters of the eleventh division of the railway mail service, with more than a hundred mail trains per day; she is a furniture centre, has the largest wagon factory in the South, and the only steel rolling mill in Texas. Like Dallas, Fort Worth gets her water from an artificial reservoir holding thirty-one billion gallons; the reservoir is fed by artesian wells.

Commercial secretaries are great on geometry. Each city is the centre of a "circle," even if its circle overlap extensively the circle of some other city. Dallas mentions every-

thing inside her circle except Fort Worth, and her rival is equally forgetful when it comes to mentioning Dallas. Doubtless Emerson's essay on circles would have been much improved had he left Concord and come to Texas to study circles, particularly the circle of which El Paso is the centre. This vast curve, which is stopped only by encountering Denver, Los Angeles, Chihuahua, and San Antonio, is so great a circle that it is nearly as big as the equator. Only a part of it is in Texas, which, as a consequence, can claim only a part of the numerous glories of El Paso as listed by local pride with its usual reticence. El Paso has the largest wood finishing and box factory in the world, employing 2,000 people and turning out about fifty carloads a day; she has the largest silver-copper-lead smelter in the United States, and leads in Texas savings banks; she does more business per capita than any city in the United States; her name comes from the fact that she occupies the lowest pass across the Rockies between the Arctic Ocean and the Isthmus of Tehuantepec. The Elephant Butte dam will enable the irrigation farmer to make his own weather over 200,000 acres of fertile land. El Paso has the largest dairy serving direct to consumers, a foundry employing 400 men, a 500,000-barrel cement plant, and wholesale and retail stores commensurate with the centre of so large a trade region. She is growing fast, the Mexican disturbances having apparently not hurt her at all. She is built of brick at—not to—an altitude of 3,760 feet, and has a supply of very pure water from the mountains.

After El Paso comes Galveston, and after Galveston comes Waco, Beaumont, Austin, all in the 25,000 class or above,

and all doing a thriving trade. Having populations between ten and fifteen thousand are a dozen or more towns with substantial wholesale and retail trades that vary somewhat in character with their locations. Brownsville at the southern tip of Texas, Laredo 150 miles up the Rio Grande, Corpus Christi 150 miles north along the coast, are the three towns that command the south Texas triangle. Texarkana and Paris in northeast Texas, Beaumont and Houston and Galveston in southeast Texas, with Marshall and Tyler and Palestine in between, are the cities of the eastern portion. Starting at Red River and going south, the cities of the densely populated black waxy country are Denison and Sherman, Greenville, Dallas, and Fort Worth, Cleburne and Corsicana, Waco, Temple, Austin, and San Antonio last but not least. In west Texas the towns are not so crowded together. Amarillo is the metropolis of the Panhandle. Wichita Falls on the north, Abilene at the centre, San Angelo on the south, are the chief towns in a vast area that lies west of the black waxy land. El Paso stands without a rival in the Trans-Pecos.

To mention fifty other lesser towns would weary the reader; to omit them will irritate some of their inhabitants. We must prefer the comfort of our readers. Besides, any geography of Texas will tell you about these towns and any map of Texas will show you where they are. If you want to know more about them, ask their commercial secretaries; if you want to know still more visit them, and you'll not only acquire knowledge, but you'll get a welcome that will warm you were you a misanthrope with a heart made of frozen nitrogen.

CHAPTER XIII

EXPORTS AND IMPORTS

"The object sought in compiling a statistical analysis of the growth, present conditions, and future prospects of the material affairs of Texas is to provide dependable data for homeseekers, reliable information for investors, and instructive facts for our citizenship."—"*Industrial Texas*."

A SHORT time ago the Texas Commercial Secretaries and Business Men's Association drew up and published in a pamphlet entitled, "*Industrial Texas*," a Texas balance sheet which exhibited, as best they could, mainly from official United States statistics, the production and consumption of the state, together with the consequent exports and imports. Such a balance sheet is bound to be inaccurate, and in presenting it, abbreviated and slightly modified, we shall use only very round numbers. It is undoubtedly sufficiently accurate to show the general Texas situation and to furnish a solid basis of fact upon which to build wise plans for the future. The "Buy it made in Texas!" the B I M I T slogan, is not the wail of a group of stand-pat local protectionists, but the cry of a people who have not yet made a full use of their abundant natural resources.

Bankers and commission men, wholesalers and retailers, occupy a legitimate place in our economic life. So do the railroads, the steamship lines, and the delivery wagons. It will never be possible again for a community profitably to cut itself off from commerce with its neighbors and the rest of

the world. It is unwise to produce at home what may more advantageously be obtained elsewhere. In Texas, however, at the present, the shoe is on the other foot; she is buying from outside many things that she could more profitably produce at home. The "Buy it made in Texas" cry is at present economically highly justifiable. If you raise at home what you eat, neither bad roads nor high freight rates nor banking credit nor middlemen nor bad markets need disturb your peaceful dreams.

"A dozen hens and one old sow
Will feed you well, helped by a cow."

Note well the following details of the Texas balance sheet, put in a way that we hope is clear and sufficiently exact for present purposes, even if not entirely satisfactory to an exacting bookkeeper. The debits and credits are very significant:

Cotton Lint.—Production, 265 million dollars; consumption, 15 millions; exports, 250 millions.

Beef and Pork.—Production of beef 50 millions of dollars, of pork 25 millions; consumption of beef 20 millions, of pork 50 millions; exports 5 millions. The beef exported from Texas barely pays for the pork imported.

Horses, Mules, and Leather.—Production of horses, mules, and leather 30 millions of dollars; consumption of horses, mules, and leather, 30 millions. The horses and mules exported from Texas about pay for the leather imported.

Cotton Seed, Corn, and Wheat.—Production of cotton seed 50 millions of dollars, of corn 100 millions, of wheat 20 millions; consumption of cotton seed 10 millions, of corn

130 millions, of wheat 20 millions. The cottonseed products exported approximately pay for the corn and wheat imported.

Lumber and Vehicles.—Production of lumber 35 millions of dollars; consumption of vehicles 35 millions. The lumber and other forest products of Texas about pay for the automobiles and other vehicles bought each year.

Rice and Sugar.—The 10 millions of dollars of rice exported pays for the 10 millions of sugar imported.

Petroleum and Coal.—Production, 20 millions of dollars; consumption, 20 millions. The 5 millions of petroleum exported pays for the 5 millions of coal imported.

Texas consumption appreciably exceeds the Texas production of the following items: agricultural implements, furniture, wool, silk, Irish potatoes, peas, beans, tobacco, coffee, tea, fish, oysters, dairy products, and liquors. The total consumption of these items is about 100 millions of dollars, the total production is about 50 millions.

Consumption and production are about equal in the case of oats, grasses, peanuts, fruits and vegetables, poultry and eggs, flowers, salt, mineral waters, gas, ice, clay products, and a miscellaneous assortment of other things. These items total about 150 millions in both the production and consumption columns.

Adding together all the items in the production column, a total of over 800 millions of dollars is obtained; adding similarly the consumption column, about 600 millions is the result. The excess of exports over imports is therefore about 200 millions a year. This excess is less than the value of the cotton lint exported, and, exception being made of

this lint, Texas is, according to these estimates, not quite self-supporting.

The agricultural extension department of the International Harvester Company has made some investigations which point toward a greater importation of food and feed than is assumed in the above summary. An error of 50 millions in the grand summary is possible. Prof. P. G. Holden is of the opinion that each chamber of commerce in Texas should "find out the amount of food and feed that is shipped into the town every year that could be produced at home," in order to show the people "where their money has gone."

The failure of Texas to be agriculturally self-supporting is in spite of the fact that "coffee and tea are the only agricultural products consumed to any extent in Texas which are not produced in commercial quantities within our borders." Bad as is the failure, it might be worse. In the first place it is remediable; whenever Texas desires independence sufficiently to work harder for it she can cease to be so largely dependent on the outside world. In the second place, Texas is a state so admirably fitted to produce cotton that she ought to continue to do so even if she does have to import other things now and then. In the third place, even as things are, exports exceed imports by 200 millions, a pretty neat sum to put by each year. This comfortable saving in part explains the very rapid increase in the wealth of the state, an increase so great that a separate chapter is needed to discuss it.

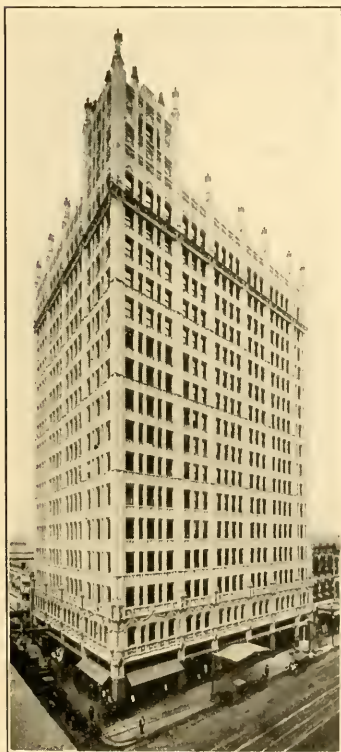
Putting 200 millions annually into the Texas stocking is a pretty big saving. It is 50 dollars apiece for every man,

woman, and child in the state. But it isn't big enough when it may be made larger so easily. On then with the slogans: "Plant more grain!" "Stop living out of tin cans!" "Live at home!" "If you can raise only two chickens a year, no wonder two small ones cost 80 cents!" "Up with the cow and the pig, down with the 60,000 farms without chickens, the 90,000 without a cow, the 125,000 without a pig, the 350,000 without sweet potatoes!" "It requires nearly 15 bales of cotton at 9 cents a pound to purchase 100 bushels of canned sweet potatoes that can be raised on one acre of ground!"

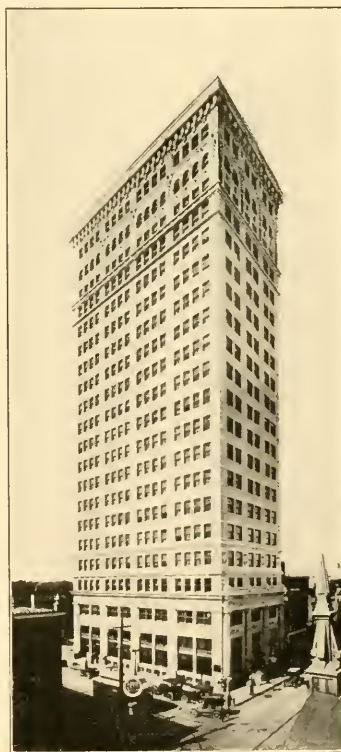
Texas, "where the prairies laugh to plenty with the tickle of the hoe," is going to make Midas, Croesus, Rockefeller & Company look like poor folks when she learns to tickle herself better, thereby producing a far more favorable balance of trade and a more Gargantuan laughter.



There is an interesting story connected with this fine office building. Brig. Gen. Anson Mills, U. S. A., retired, in 1858 made the first survey of El Paso's town site. For more than half a century he held on to property he acquired in the town site, and recently he built this large reinforced concrete office building on the very site where the first building of the present city once stood.



Courtesy of Hann and Kendall
THE BUSCH BUILDING, DALLAS



THE AMICABLE INSURANCE BUILD-
ING—WACO'S SKYSCRAPER



Courtesy of the Houston Chamber of Commerce
RICE HOTEL, HOUSTON, TEXAS

CHAPTER XIV

THE MATERIAL WEALTH OF TEXAS

"If I rejoiced because my wealth was great,
And because mine hand had gotten much;
This also were an iniquity to be punished by the judges."

—*Job*.

IT IS the duty and the privilege of the remainder of this book to deal with the higher activities and the spiritual wealth of Texas, with human welfare and human progress. Here it is our humbler task to summarize from the Census the material results, measured in dollars, of the working of the people of Texas with the land upon which they live. The Census summary is very incomplete. It takes no account of the strength or the weakness of the people, of the smiles of children and the good deeds of men, of summer breeze and bright sunshine, of the fishes in the sea and of most of the minerals in the earth, of the coming rains and of future crops. It includes only some of those tangible things that men are accustomed to measure in dollars. Incomplete and imperfect as the Census figures relating to wealth may be—the Census itself calls them "estimates"—they nevertheless show beyond the shadow of a doubt how very rapidly Texas is increasing in material wealth.

Owing to the fairly rapid decline in the value of the dollar in recent years, the real growth in material wealth has not been as great as the following figures indicate. Making all fair allowances for the depreciation of money, assume, in

excess of the real decline, that the dollar of 1915 is worth only half as much as the dollar of 1900, the Census figures still show an enormous increase in wealth during the last fifteen years.

TRUE VALUE OF ALL PROPERTY, ESTIMATES OF THE U. S. CENSUS,
IN MILLIONS OF DOLLARS

YEAR	TEXAS	U. S.
1850	53	7,136
1860	365	16,160
1870	127	24,054
1880	825	43,642
1890	2,106	65,037
1900	2,322	88,517
1904	2,836	107,104
1912	6,860	187,739

The Civil War and the Reconstruction retarded the material development of Texas, but the decrease in wealth shown between 1860 and 1870 is mainly psychological. The soil was as fertile in 1870 as in 1860, the Yankees had carried none of it away, the destruction of property had not been excessive, the negroes were more numerous, the total population had increased from 600,000 to 800,000. The very oldtimers like to think that the Yankees ruined them, it seems to make them feel better. Things were pretty bad doubtless—the carpet-baggers were an awful infliction—but there was plenty to eat and many children were born during the war and Reconstruction decade.

From 1870 to 1890 was a period of very rapid and real growth in every way. The early nineties saw a great decline in prices that caused the total wealth in 1900 to be only

THE MATERIAL WEALTH OF TEXAS 277

10 per cent. in excess of that in 1890, but the real development of the country was not retarded to anything like the amount indicated by the figures. Since 1900 the rise in prices, combined with an enormous actual growth, has produced an increase in values that is absolutely astonishing. The wealth per capita has doubled in eight years! Think of an increase of *four billions in eight years*, of *five hundred millions in one year*! This is an increase of nearly a thousand dollars per capita in eight years, of considerably over a million dollars per day. Part of this increase is due to the whimsical vagaries of money, affected by natural causes or by the manipulation of high finance; part is real.

TRUE VALUE OF ALL PROPERTY IN TEXAS, CLASSIFIED ESTIMATES OF
THE U. S. CENSUS IN MILLIONS OF DOLLARS

	1900	1904	1912
Real property and improvements	1,30	1,555	3,608
Live stock	249	287	395
Farm implements	30	37	62
Manufacturing machinery	34	43	110
Silver and gold coin	54	64	81
Railroads and equipment	198	238	1,000
Street railways, shipping, etc.	46	69	172
All other property	401	543	1,432
Total	2,322	2,836	6,860
Assessed values	946	1,083	2,533

The details of this recent increase in values are worthy of attention. Nearly two of the four billions of increase between 1904 and 1912 is due to the increased prices attached to land. The increase of \$750,000,000 in the railroads is

probably due in part to under-valuation in 1904 and over-valuation in 1912. The figures of real significance in showing the development of the state are to be found under "farm implements," "manufacturing machinery," "and all other property." The last item includes household furniture, vehicles, clothing, and personal adornments, and stocks of merchandise imported or manufactured or raised on the farms. The rapid growth of this item is particularly indicative of the growth of larger stores and the building and furnishing of better homes to live in. The spending of \$25,000,000 a year for automobiles is another straw that points in the same direction.

It used to be said, irrationally, that hot-air furnaces would not work in Texas; now every town house that is built costing over \$5,000 is equipped with one. Porcelain bathtubs are spreading from the towns to the country, and tasteful bungalows are replacing the old box houses. No town of any size is without an electric-light plant, a water-works, a telephone system, and an ice factory. Oldtimers who drank ditch water and rode horseback, regarding even a buggy as effeminate, now dash along in motor cars carrying a chunk of ice and some certified water bought at the town drug store.

The times change and we change with them, especially in town. In the country the invasion of better living conditions and of luxuries even may be seen but is not so apparent. Primitive conditions prevail still to a large extent in many districts, the distribution of good things is sadly unequal, but the woman has hidden the leaven in three measures of meal and the whole will soon be leavened.

Texas buys food that she ought to raise at home, goods

that she ought to make at home. Like all miserable sinners, she has left undone those things which she ought to have done and she has done those things which she ought not to have done. But the Lord has been merciful, Texas has flourished, and her wealth has increased by millions and millions. An overflowing horn of plenty hangs always over Texas, spilling endless good things in all directions.

PART V—PROGRESS AND ITS PROBLEMS

CHAPTER I

BANKING

"Moneys is your suit."—*Shylock*.

SAM HOUSTON, a friend of Andrew Jackson, was, like his distinguished mentor, an enemy to banking, especially governmental banking enterprises. In 1833, while Texas was yet a part of Mexico, in assisting to prepare a proposed constitution calling for separate statehood for Texas and Coahuila, Houston had inserted this sweeping provision:

"No bank nor banking institution nor office of discount and deposit nor any other moneyed corporation nor banking establishment shall ever exist during the continuance of the present Constitution."

Houston claimed that "human cupidity and stringent times would prove stronger than constitutional provisions." The spirit of this early opposition to banks, intensified by the breaking down of the state banking system throughout the South during the Civil War, has continued to characterize state banking legislation in Texas almost up to the present time, so much so that the first Commissioner of Banking in Texas, Mr. Thomas B. Love, declares that "the story of banking in Texas is altogether unique in the financial history of the United States and of the world"; for the men who thought like Houston wrote into the first State Constitution of Texas a provision which read:

"No corporate body shall hereafter be created, renewed, or extended with banking or discounting privileges,"

a provision which remained in force, except for an interregnum during "Reconstruction" days, until repealed by the people in November, 1904, prior to the enactment of a law which made possible the present successful state banking system of Texas. The opposition to state banks, however, did not prevent efforts being made to secure special charters. Texas and Coahuila in 1835 chartered the Commercial and Agricultural Bank with a capital of \$1,000,000. After Texas' independence had been won the Texas Congress recognized the charter of this institution and issued an additional charter to the Texas Railroad Navigation & Banking Company. This latter institution had a short and inglorious career, never, in fact, really being organized for business, though some of its supporters disposed of enough of their stock to yield a profit of \$60,000. The charter of the Commercial and Agricultural Bank with exclusive right of note issue was taken over later (in 1841) by McKinney and Williams, who had "made large advances to the Government at an early period of its existence." The State Constitutional Convention of 1845 refusing to interfere with this charter, the bank opened for business at Galveston in 1848 and later established a branch at Brownsville. Owing both to unfriendly suits instituted by the state government and to the death, in 1858, of its first and only president, Samuel M. Williams, the bank went into voluntary liquidation. A writer of that time says of its history:

"Since the establishment of this bank the mercantile interest of this portion of Texas has been much benefited as it has introduced a system of promptness in taking up promissory notes on the day on which they are due, which was far from being the custom in olden times; besides

which, this establishment does a good business in exchange and has been a great convenience to the merchants of Galveston."

Another bank, also located in Galveston, the firm of R. & D. G. Mills, operated successfully at the same time by endorsing the notes of a Mississippi banking house. These notes were known for years as "Mills money" and freely circulated to the amount of several hundred thousand dollars; but this bank, too, became involved in suits instituted by the Attorney-General of Texas. With its retirement from business came to an end the two important before-the-war banking concerns, except the commercial houses that carried on such practical banking operations as were included in and incident to their business.

In this connection, the attempts of Texas to go into banking business on her own account are interesting. During the Plenary Convention which met in Washington, Texas, late in 1836, Asa Brigham, afterward the first Treasurer of the Republic, introduced a resolution, which was tabled, to establish a National Bank of the Republic. Later the same year, during the sessions of the first Congress, he re-introduced the measure, which, along with other bank legislation, passed into oblivion because of the financial panic of that time throughout the American Union. Henry Smith, Secretary of the Treasury in 1837, suggested the founding of a National Bank on Texas bonds, a recommendation which was followed by a Senate bill for the establishment of such a bank with a capital of \$3,000,000. The bank was to be based upon a special pledge of the public domain, should be the Government's fiscal agent, a regulator of exchange, a bank of discount, loan, and deposit,

and a bank of issue as well; and should, of course, be extended by branches established in every convenient and suitable part of the Republic. President Lamar, who followed President Sam Houston, endorsed the scheme of the National Bank based on the credit and national resources of the state. This movement was finally thwarted by the killing of a pig belonging to a hotelkeeper in Austin. As some one said at the time: "The cackling of geese saved Rome, but the squealing of a pig doomed the Bank of Texas and seriously damaged the credit of the infant Republic."

To promote the enterprise James Hamilton was sent to France to float \$7,000,000 of Texas bonds. Knox's "History of Banking in the United States" tells the remainder of the story:

"While negotiations were pending in France, Fate was fighting against them in Texas, in the shape of a herd of swine owned by an Austin hotelkeeper. The French Minister, M. de Saligney, had a fine horse. The pigs found their way into the stable and ate the corn dropped from the manger. The French servant, driving them out, killed one. Mr. Bullock, the owner of the pigs, at once registered his resentment by giving the servant a sound thrashing. M. de Saligney complained to the Texas Government. Mr. Bullock was arrested and pending trial was released with the Secretary of the Texas Treasury on his bond. M. de Saligney happened in the hotel. Mr. Bullock ejected him. Another complaint, another arrest, and another release, with the Treasurer as bondsman. The matter had by this time grown from its first proportions as a personal disagreement and became a matter of public importance. It was everywhere discussed, in the newspapers, on the streets, and in Congress. Every one upheld Mr. Bullock and his pigs. The Government actually sent to France and asked the recall of the French Minister. Thus the thing became of international moment. It happened that M. de Saligney was closely related to the French Minister of Finance, with whom rested the consummation of the loan which was to lift Texas out of her financial troubles and put her National Bank on foot. Negotiations

were abruptly broken off. What the results would have been had that loan been made, one can only conjecture."

Again in recent years the ghost of the Bank of the Republic has reappeared, being fostered this time by Governor O. B. Colquitt. He proposed the chartering of a Bank of Texas with \$33,000,000 capital to be obtained partly by pledging the bonds held by the state public free schools, partly by utilizing the resources of the State Treasury, and partly by employing one-half of the cash reserves of all state banks. The scheme met with some favor, but seems now to have been abandoned.

The conditions under which banks in the early days of Texas were operated may be gathered from some reminiscences of F. M. Getzendaner of Waxahachie:

"Money to meet exchange was at first sent to Bryan by friends to be sent thence by express to the First National Bank of Houston, and by it to where we might direct to remote sections of the United States. It was not long, however, before a correspondent at Galveston and a little later in New York was established. But what worried most was to get the funds to Bryan. It was about 170 miles distant. There being no railroad or express office, it had to be carried by friends or teamsters going down, and the awful 'dead line' had to be crossed in going there. The 'dead line' was a certain region south of Owenville infested at the time by robbers and murderers, and no one dared to cross it if it were known that he carried money; so, whether friends carried the funds as a favor or for a compensation, we never slept well till advised that the money got through. Here I may divert to say that on a certain occasion Col. B. J. Chambers of Cleburne called for some considerable pieces of exchange on Galveston, stating that he feared to carry so much money on his person through the country to Bryan. He was going to Galveston. The exchange was drawn and given to him. That same evening the writer incidentally met him at the hotel and in confidence asked him if he would take a package of valuable papers to Ball, Hutchings & Co., at Galveston. He cheerfully assented to do so and in the morning the

valuable package was handed him and he carried and delivered it in Galveston. In that package was the money to pay his draft and more. I don't think the Colonel was ever advised of the imposition. Another man carried some several thousand dollars in gold. He stayed all night at Horn Hill and placed the bag under his pillow. He got a mile or so on his way the next morning before he thought of it. He hastened back to his room and found it undisturbed. Of course if the friends had been unfortunate enough to lose these packages, the loss would have been ours. Such risks made exchange high, and at times made the bankers uneasy.

"As stated, our capital was small, but some friends who had received some money from the old states offered to lend it and we borrowed. We could then make limited short time notes at, say 5 per cent. per month interest. Some of our bankers now loan round amounts with adequate backing at 5 or 6 per cent. per annum. But at this time money in hand was worth more than I ever saw it before or have ever seen it since or will ever see it again.

"A friend sought and obtained the loan of a thousand dollars in gold for one month. He did not meet his paper at maturity as was usual then, but in two months came in and paid the interest and asked for more time which was granted. He held that money for twelve months and then paid it up. After doing so, I asked him how he could afford to keep the money so long at such a rate of interest. 'Easy enough,' said he. 'You know my business is to haul freight and to barter between here and the depot at Bryan. I made 10 per cent. on the money every month, and I simply divided profits with you.'

"Again a party borrowed some three hundred dollars for thirty days. At the end of fifteen days he came in and called for his note. It was suggested that he use the money for the whole time. 'No,' said he, 'I have doubled the money and I pay now.'

"There were bad men abroad in the land in those early days. A noted outlaw with a squad of men held the Trinity bottoms about the mouth of Red Oak Creek, and later on another one and a band of men succeeded them; all desperate men hiding from the military or other officers of the state.

"Robbery, thieving, or even murder were common. The people lived in an atmosphere of dread. Farmers who happened to have safes moved them away or left them wide open as evidence that no valuables were inside. One or two six shooters would be found in every bank or exchange office, and a resolute man slept there every night. Our safe was said to be fireproof, but I doubt it, and a skilled burglar in its opening,

by knocking to pieces or digging through its walls, would not require more than twenty-five minutes. An attack at any time day or night would not have been much of a surprise.

"One morning before breakfast a fine-looking man, six feet tall, called at the office and remarked that he wanted to make a deposit. I counted in say ten thousand dollars in greenbacks and some thousands in gold, counted till my back hurt, and was alarmed that we were to be responsible for and burdened with so much money. At his request certificates of deposit for both amounts were issued, embracing in one certificate the gold and in the other the currency. Separate accounts for the different kinds of money were kept. That same day later in the morning another man called and wanted to buy cattle and wished to sell New York exchange to the amount of ten or twelve thousand dollars. He was a stranger, could not identify himself, and as much as we wanted the exchange we declined to purchase it.

"In, say, three nights the writer, who slept in the office, was aroused by a loud knocking at the door about one o'clock, and, instead of a burglar or robber, June Peak of Dallas was found at the door. He asked about the two men mentioned above, described them, and said that although apparently entire strangers to each other, they were partners in a great swindle; that they had sold exchange in Fort Smith, in Sherman, and later in Dallas, to T. C. Jordan & Co., to the amount of seven thousand dollars. These drafts were raised from small sums; that he was at the instance of the Dallas firm running them down and would go day and night till he got them. He requested that I hold the deposit they had made till Jordan came down; and then went on. Through the aid of the military at Waco, he soon overtook and captured the men at Belton and brought them back to Waco, where the United States Military held them. Subsequently they were taken to Dallas and in some way escaped from the jail there. A prominent law firm of Waco was employed as attorneys, the certificates endorsed to them, which certificates upon presentation in about four weeks were paid. I sympathized with Jordan and would have been glad to have held the money for him, but I could not upon proper presentation of the certificates by that law firm refuse payment. Jordan, I was informed, recovered some of the money.

"The difficulties and risk of placing money with correspondents, the danger at all times of robbers, thieves, and highwaymen were ever present. The remote localities and bad roads, bridges and lack of easy communication made each bank a factor by itself, standing isolated and alone,

and beyond the help of other banks, no matter what the emergency. Thus the panic of 1873 was scarcely felt in this section. It took about two weeks to get a letter from New York; and sometimes when streams were up, it took two weeks, and on one occasion about a month, to get Galveston mail.

"The bank building was a lawyer's office double-room wooden structure, a janitor unknown, clerks, probably one; no heavy ledger nor other books; no blanks; none of those thousand and one other helps now considered necessary in banks. It was a ground start, and the banker ruled his blank books to suit himself, kept his funds in his own good way, and managed his business in his own peculiar manner, developing it always to meet conditions as they might arise, as his plant grew in stature.

"Our office or bank was situated a little distance from the public square. To make the situation of the bank known, a large sign with the word 'Bank' was nailed to the porch, so as to be seen from the square. One summer evening the writer sat upon the porch as three cowboys passed along. One of them, noticing the sign, spelled 'B-A-N-K, bank! That's a hell of a looking bank!' That did not admit of denial."

The constitutional inhibition against all incorporated forms of state banking was finally stricken out by a vote of the people held in 1904. After protracted legislative fights and much public discussion, under the leadership of Mr. Thomas B. Love of Dallas, afterward the first Commissioner of Banking of Texas, the necessary amendment was adopted and Texas was freed from its anomalous position of opposition to incorporated state banks. The state banking law went into effect August 14, 1905. Under its operation banks at once opened in many small towns unable to support a national bank. The law provides that in towns containing less than 2,500 population the capital stock of a bank must be \$10,000 or more; in towns of a population less than 10,000, \$25,000 or more; less than 20,000, \$50,000 or more; more than 20,000 population, \$100,000 or more. Special provision is made for the organization of banks and trust

companies, or trust companies. These institutions are required to carry paid up capital stock ranging from \$50,000 to \$10,000,000, except that in cities containing more than 20,000 inhabitants such institutions are compelled to have a paid up capital stock of not less than \$100,000. Other requirements imposed on state banking institutions are not very dissimilar to those under which national banks operate. The same law authorizes the establishment of savings banks, with capital ranging from \$10,000 to \$5,000,000. Extra protection is thrown around depositors in savings banks, in that it is unlawful to invest more than 85 per cent. of the deposits. It is required that all savings accounts be kept separate and distinct from other accounts in the banks. It is rather remarkable that the law has been in force and effect in Texas for more than ten years and that not one savings bank has been organized under its provisions. Texas is absolutely, so far as the records show or investigation can determine, without an incorporated savings bank, except as an accessory either to a state bank or to a national bank. Thirty of the state banks have savings departments, with total deposits on November 30, 1915, in excess of \$3,000,000. Many national banks of Texas also having savings departments, though Texans are very backward as savings bank patrons. Mr. Gossett, Deputy Commissioner of the State Banking Department, thinks that the people of Texas are not yet educated up to the idea of hoarding money in this particular manner; he thinks, further, that probably the banks are somewhat at fault in that they have not sufficiently recommended to their customers the wisdom of small savings.

In July, 1913, a law went into effect attempting to do for the people in the rural districts what the small state banks were doing in the villages. This act made it possible to incorporate rural credit unions "for the purpose of promoting thrift among its members and to enable them, when in need, to obtain for productive purposes moderate loans of money for short periods at moderate rates of interest." Any ten persons are empowered to form a rural credit union and sell shares of stock at \$25 each, receive deposits, and loan money. No loan can be made for more than \$200, for a longer period of time than eight months, and no note can be renewed except for a smaller sum. This act is also largely a paper measure, only one "Union," located at Fort Worth, having been incorporated under its terms. As this "Union" is only a few months old, its history is yet to be made.

Within three months after the state banking law went into effect, twenty-nine banks, with deposits of nearly two millions of dollars, were in operation. A lapse of ten years has seen those twenty-nine banks increase to 867 banks, with total deposits exceeding \$100,000,000. This growth has been accomplished with only seven bank failures—a truly remarkable record. In his report for 1913-1914, the State Banking Commissioner shows that the investments of the 867 state banks are divided as follows:

Loans	77.3	per cent.
Loans on real estate	12	" "
Stocks and bonds	4	" "
Banking houses, etc.	5	" "
Real estate taken for debt	1.7	" "
Total	100	" "

EXHIBIT OF STATE BANKS IN TEXAS SINCE THE SYSTEM
WAS AUTHORIZED

The following statistical table gives a complete exhibit of a decade of progress in state banking in Texas:

DATE	NO. OF BANKS	GUARANTY FUND	LOANS & DISCOUNTS	STOCKS & BONDS
9-30-05	29	None	\$ 1,739,783.00	\$ 162,900.00
10-31-06	136	None	10,373,469.00	150,500.00
12-3-07	309	None	23,026,596.00	516,500.00
11-27-08	340	None	23,744,184.00	747,050.00
12-31-09	515	None	42,471,754.00	1,248,030.00
11-10-10	621	368,900.00	50,060,968.00	2,397,568.00
12-5-11	688	45,6600.00	59,931,043.00	3,342,812.00
11-26-12	744	677,162.00	71,288,282.00	4,504,873.00
10-21-13	832	808,000.00	91,541,228.00	5,517,034.00
12-31-14	849	1,137,024.00	88,069,200.00	2,565,618.00

REAL ESTATE & BANKING HOUSE	EXCHANGE AND CASH	CAPITAL	SURPLUS AND UNDIVIDED PROFITS	DEPOSITS
\$ 47,300.00	\$ 2,497,117.00	\$ 1,809,000.00	\$ 238,000.00	\$ 1,731,425.00
483,676.00	8,108,566.00	4,875,500.00	523,000.00	13,585,027.00
1,560,287.00	9,391,264.00	10,006,700.00	1,139,500.00	20,478,528.00
2,079,796.00	13,145,408.00	10,690,500.00	1,638,303.00	27,014,970.00
3,336,752.00	24,377,586.00	16,128,500.00	2,966,835.00	50,472,661.00
4,203,121.00	27,333,054.00	20,197,500.00	4,680,804.00	61,667,949.00
4,633,744.00	26,641,973.00	23,520,500.00	6,473,602.00	63,488,857.00
4,170,979.00	48,247,899.00	27,302,000.00	8,480,807.00	100,889,246.00
6,184,060.00	36,982,176.00	32,576,500.00	10,424,927.00	100,224,400.00
7,010,900.00	23,727,070.00	32,514,000.00	10,263,818.00	77,335,970.00

The ten largest state banks, or banks and trust companies, with their places of business, follow:

NAME	CAPITAL
*West Texas Bank & Trust Co., San Antonio . . .	\$ 250,000.00
Rio Grande Valley Bk. & Tr. Co., El Paso . . .	500,000.00
Bankers Trust Company, Houston . . .	2,000,000.00
Union Bank & Trust Company, El Paso . . .	150,000.00
Citizens Bank & Trust Company, Austin . . .	125,000.00
Texas Bank & Trust Company, El Paso . . .	100,000.00
First State Bank, Dallas.	250,000.00
Central Trust Company, San Antonio.	1,000,000.00
El Paso Bank & Trust Company, El Paso . . .	100,000.00
Dallas Trust & Savings Bank, Dallas	300,000.00

SURPLUS	CASH	LOANS	DEPOSITS
\$ 33,325.00	\$ 449,000.00	\$1,587,000.00	\$2,846,000.00
139,219.63	612,000.00	1,933,000.00	2,745,000.00
829,175.05	361,000.00	4,037,000.00	1,753,000.00
42,473.73	1,053,280.00	715,000.00	1,690,000.00
39,749.41	1,125,000.00	578,000.00	1,611,000.00
51,417.54	770,000.00	836,000.00	1,613,000.00
38,836.42	471,000.00	1,155,000.00	1,415,000.00
124,268.22	250,000.00	1,957,000.00	1,255,000.00
56,039.05	283,000.00	955,000.00	1,120,000.00
215,680.87	139,000.00	883,000.00	1,087,000.00

The passage of the state bank guaranty law, which went into effect January 1, 1910, is certainly a large factor in the solidarity of the state banking system of Texas. Under its operation every state bank safeguards its depositors either by bond or through a depositors' guaranty fund. The latter provision requires every bank to set aside one-fourth of 1 per cent. of its average daily deposits for the previous year, one-fourth of which is to be paid in cash to the State Treasurer, the balance to be deposited to the credit of the

*The West Texas Bank & Trust Company has failed since this chapter was written.

guaranty fund. When the state guaranty fund reaches the sum total of two millions of dollars, no further payments are required until the amount again falls below this sum. New banks must set aside 3 per cent. of their capital and surplus. Banks preferring the system of giving bond are required to execute a bond equal to the amount of their capital stock. The law is enforced through a State Banking Board, consisting of the Commissioner of Banking, the Attorney-General, and the State Treasurer. This Board has extraordinary powers. For example, they may investigate and pass upon the personnel of bank officers, and decline to approve a charter on the prior record of these men. The Board has also power to close and liquidate banks, and, through the operation of the law, a number of banking institutions have been liquidated quietly without loss to the depositors. In case of bank failure the depositors are paid first, the guaranty fund being used to make up whatever amount of cash is necessary to pay each depositor promptly and in full.

Both plans of guaranteeing depositors were made applicable to national banks; notwithstanding, the national banks of Texas, because of Federal control, cannot operate under the law. The influence of these banks in the legislature was strong enough, however, to prevent special advertising of the guaranty features. The law provides that no guaranty bank may advertise this feature except with the stereotyped statements: "The non-interest bearing and unsecured deposits of the bank are protected by the depositors' guaranty fund of the State of Texas"; or, "The depositors of this bank are protected by guaranty bond under the laws of this state." Within less than four years

after the guaranty law went into effect the number of state banks had increased 68 per cent., or from 515 to 867. At the same time during the same years the paid up capital increased 112 per cent. Sixty-two banks, or 7.12 per cent., gave bonds equal to the amount of their capital stock instead of becoming a part of the guaranty system. In case of the failure of any of these banks the indemnity accrues to the benefit of the depositors. The failures of banks under this system, seven in number up until September 12, 1914, afforded a net loss to the contributing banks of \$116,427.21. At the time this is written all of the affairs of the failed institutions have not been settled, and the amount of loss will likely be much reduced.

The field work of enforcing the state banking laws is in the hands of eighteen examiners, who are paid a salary of \$2,000 each and travelling expenses. The law requires each examiner to be an expert bookkeeper and accountant, with five years' practical experience as a banker. One examiner is assigned on the average to forty banks. The fees charged banks for examination have thus far much more than paid the entire expenses of the system.

Unquestionably a possibility of danger in the state banking system—a possibility that is ever present—is political interference with its management. The Governor appoints the Banking Commissioner, and he in turn appoints the office force and the eighteen examiners. Be it said to the credit of the system in its operations up to the present, that, however appointments have been influenced, capable, efficient, and honest men have served as officers. Some of the examiners, on whose supervision certainly depends the suc-

cess of the guaranty law, have held office since the law went into effect; others have left the service only because of handsome promotions. Seven failures in ten years, none fortunately involving great sums, in a business of 800 units amounting to the large total of \$136,000,000, is certainly an exceptional record. In commenting on the failures Commissioner Patterson says: "It is a noticeable fact that of the seven banks closed by this Department, each failure was due largely or entirely to the misapplication of the bank's funds by its officers," a statement which brings to mind the declaration of an Assistant Comptroller of the United States that no national bank has ever failed that had complied with the plain requirements of the federal banking laws. The Banking Commissioner thinks that \$20,000,000 could be easily added to the deposits of state banks were they allowed to advertise properly the guaranty feature, though he declares, even under this handicap, "the growth has been remarkable." And in this judgment many will agree. Since the beginning of the guaranty fund six years ago, twenty-three state banks have "nationalized," and thirty national banks have taken out state bank charters. Though national banks have grown steadily during this period, they naturally look with no altogether unselfish longing at the one hundred millions deposit account secured by their rivals.

In addition to the guaranty feature, another distinct service of the state banking system is due to the fact that banking facilities are more available to the people of small towns and villages. According to the latest published report, 249 banks had been located in towns of less than 2,500 inhabitants, and 590 in towns of less than 5,000 inhabitants.

These numerous small financial units, widely scattered, not only bring the conveniences of the city to the doors of country people, but they without doubt add financial solidarity to the entire system. Indeed, the special work of state banks would seem to be in this field, and here is where its success will win the most general public favor.

Galveston, as seems proper, is the home of the first national bank chartered in Texas. Its name, too, is appropriate: The First National Bank, chartered September 15, 1865; and its fitness has been further demonstrated by the fact that the fifty years of its life have been unattended by change of name or place and without financial disaster. It has been common for Texas banks, especially those located in the cities, through amalgamations or purchase, to lose their original charter name. Three other national banks were chartered in 1866. The number in 1915 is 535. Individual depositors have grown during the same period from \$626,000 to \$185,000,000. Texas had in her Christmas bank stocking December 25, 1915, nearly \$300,000,000, or more than \$60 for each man, woman, and child, including half a million pickaninnies.

Of the ten largest national banks in Texas, seven have a capital of \$1,000,000 or more, three with deposits exceeding \$10,000,000, none with a cash balance of as much as \$5,000,000, and none with loans amounting to as much as \$10,000,000. While the tendency to combine everywhere noticeable in the United States is not absent in Texas, the state has not as yet developed any overgrown, haughty, and powerful bank that lays down the law to the smaller fry, as do one or two concerns in the neighborhood of Wall Street.

This table shows the ten national banks of Texas carrying the largest deposit accounts. The figures are in thousands of dollars:

	Capital	Surplus	Cash	Loans	Deposits
Amer. Exch. Nat'l Bank, Dallas . .	\$1,500	\$1,000	\$4,570	\$9,835	\$12,710
So. Tex. Com. Nat'l Bank, Houston .	1,000	1,000	3,435	8,073	10,325
First Nat'l Bank, Houston . . .	2,000	400	3,011	9,051	10,048
Security Nat'l Bank, Dallas . . .	1,500	500	2,584	7,564	8,184
Union Nat'l Bank, Houston . . .	1,000	400	3,476	4,477	7,958
City National Bank, Dallas . . .	1,000	1,000	2,746	6,803	7,647
Ft. Worth National Bank, Ft. Worth.	600	1,000	2,615	5,218	6,776
First National Bank, Ft. Worth . .	1,000	400	2,328	4,906	6,125
Houston Nat'l Exch. Bank, Houston .	400	100	2,031	3,508	4,907
American Nat'l Bank, Austin . . .	300	600	2,022	2,601	4,027

The table which follows exhibits the story of Texas national banking in five-year periods. The growth has been continuous and the periods of panics, except the financial storm of 1893, are not apparent from the figures which are in thousands of dollars:

Years	No. of Banks	Loans and dis- counts	U. S. Bonds	Cash, and cash items	Capital	Surplus	Undivided profits	Out- standing circulation	Individual deposits
1866	4	\$209	\$439	\$439	\$428	\$4	\$36	\$170	\$626
1873	7	1,180	1,025	699	925	180	79	670	1,044
1878	11	1,508	825	687	1,050	296	76	533	1,516
1883	43	10,099	1,927	2,200	3,653	1,049	683	2,462	8,003
1888	100	24,689	3,034	4,033	11,806	2,777	1,129	2,313	15,785
1893	222	44,828	5,549	6,064	23,596	4,938	2,332	4,611	25,748
1898	196	42,838	6,107	7,000	19,205	5,230	2,171	4,419	37,895
1903	369	87,965	12,499	11,591	27,577	9,105	6,367	10,646	71,381
1908	535	113,259	26,714	23,198	40,868	18,081	7,889	24,041	115,840
1915	535	217,516	41,427	25,494	54,022	27,184	12,851	39,265	185,092

The anti-banking provision in the constitution and its attendant prejudice made the growth of national banks slow in Texas. Only three were chartered and survived from

1866 to 1873, while four opened for business during the next five-year period. In 1878 Texas contained eleven national banks. Five years later the number had increased to forty-three, the deposits increasing from \$1,500,000 to \$8,000,000. This rapid growth received a slight setback following 1893, a period during which a number of small banks were forced to close, though in many cases their assets were entirely sufficient and sound. Wall Street had the cash and refused to ship it inland either because they did not have the money or for reasons not disclosed. Even a large bank in Austin, carrying 56 per cent. of its deposits in ready cash, suffered uneasy moments during the days of unusual financial distrust. At that time the clearing-house device was not common in Texas and each bank went alone. The little fellows, in particular those who had not foreseen the storm, could not weather it. Although the number of banks decreased from 222 in 1893 to 196 in 1898, the total deposits increased for the same period more than \$12,000,000. Texas people did not blame the banks for the panic, perhaps partially for the reason that no depositor was inconvenienced. The practice of limiting the amount that could be checked out in one day was not introduced until 1907. Many people yet believe that the banking troubles of that year were deliberately precipitated by New York bankers who withheld the deposits of Texas banks as well as their customary loans when the money was most needed. Clearing-house arrangements and the limits placed on checking both steadied the Texas situation, and few bank failures resulted. Friends of the Reserve system believe that in the future Texas banks will not be so dependent on

New York. That, however, yet remains on the knees of the gods. Texas national banks have in times of strong demand for money in New York loaned through their correspondents many millions of money in that city. In 1912 an Austin bank had at one time outstanding New York call loans amounting to \$1,500,000. Since 1913 all Texas money has been needed for Texas projects, and Texas banks are generally very particular to care for, first of all, their own people.

Statistics of the number of savings departments in connection with national banks are not available. According to the estimate of Mr. Gossett of the State Banking Department, the total savings deposits in all Texas banks will not exceed \$15,000,000, an amount far below the savings deposits of other states of equal wealth.

While there has been no recent increase in the number of national banks in Texas, despite the popularity of the state guaranty system and its marvellous growth, no lack of confidence is felt by the people in the banks supposed to be backed by Uncle Sam. From 1908 to 1915 the deposits of 535 national banks had increased \$70,000,000. That tells the whole story.

Under "An Act concerning private corporations," passed by the Reconstruction legislature in 1871, a number of state banks, known as "Special Charter" banks, were organized, six of which are yet operating, in each instance as national banks; several other banking establishments still run under the old state charters. Although required by law to report to the Secretary of State, only one of these banks, the Fannin County National Bank, made reports with any regularity. The Constitution of

1876 reenacted the provision forbidding all state banks, though, under Article XVI providing that "the rights of property and of action which have been acquired under the constitution and laws of the Republic and State shall not be divested," all the Reconstruction period banks were left unmolested. In fact, the state has paid little or no attention to them. Too much respect for the constitution has, in many instances, resulted in downright suffering to the people, for some of the most disastrous bank failures in Texas have been instances of those operated under the special practically unrestricted state charters. These failures, and the suffering that followed in their train, illustrate the wisdom of impartial, rigid, and constant supervision of such public enterprises as banks. If the "Reconstruction" state banks of Texas have not been in reality outlaw banks, they have been beyond the law, for the law took no cognizance of them; and their history and the record they have left behind them has in many cases been quite as malodorous as other legislative action of the deplorable days of Reconstruction.

While Texas until 1905 prohibited by the constitution all chartered state banks, it left the way open for the operation of as many private banks as the people's patronage would allow to live. Information is necessarily lacking about the progress of the many private banks (each must display prominently the word "Unincorporated"). The *Texas Bankers' Journal* estimates the present number at 181; the Commissioner of Banking thinks not more than 150 are doing business. Such private banking houses as Sealy, Hutchings & Co., Galveston; W. L. Moody & Co., Galveston; Giddings & Giddings, Brenham, and others have

enjoyed long and prosperous careers and continue to possess the confidence of a large clientage. The total amount of the capital and deposits of these banks is a matter of conjecture. The law takes no cognizance of them more than it would of any ordinary business concern.

Texas as a banking centre first won distinct national recognition when Dallas was chosen over New Orleans as the location of one of the twelve National Reserve Banks. At that time 566 banks carried deposits in Dallas banking houses totalling \$10,756,000. Dallas was able to show to the locating committee of the Reserve Bank her superiority as a trade centre over New Orleans, at the same time her claims for recognition comparing quite favorably with those of St. Louis and Kansas City. Some of the statistical arguments presented in support of the ambition of the Texas city, showing the trend of trade, are of unusual interest and may be found in the Chapter on the "Trade of the Cities."

With a Reserve Bank located in the heart of the black waxy belt in its chief commercial centre, embracing in its territory the entire state, Texas has won its rightful place as the most important unit in the commerce and finance of the Southwest. Of hardly less importance is the fact that its bigness has all been embraced in a single financial unit, thus giving an initial impulse to another force that will tend to keep Texas one and indivisible.

CHAPTER II

THE GRANGER MOVEMENT

“There’s been a lot to say about the man behind the gun,
And folks have praised him highly for the noble work he done;
He won a lot of honor for the land where men are free—
It was him that sent our enemies kitin’ back across the sea.
But he’s had his day of glory, had his little spree, and now
There’s another to be mentioned—he’s the man behind the plow.”

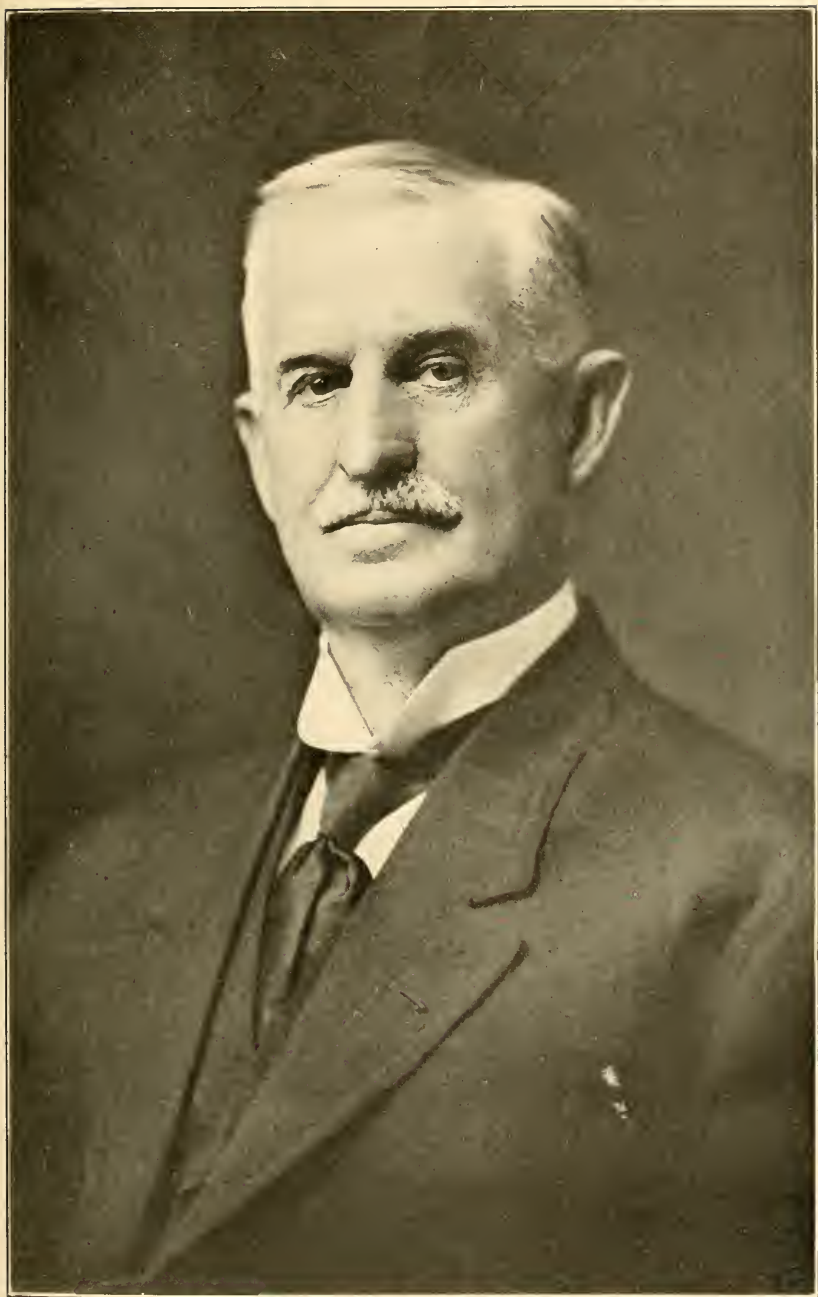
IN COMMON with nearly every other state in the Union, the farmers of Texas, since the early seventies, have taken part in a succession of organizations whose purposes were to make farming more profitable and country life more attractive. In Texas the predominance of the farming industry lends added importance to the story of these movements. The Grange, or Patrons of Husbandry, the Farmers’ Alliance, the Agricultural Wheel, and, finally, the Farmers’ Union, have each at some time numbered thousands of members and exercised considerable influence, particularly on politics in Texas. It is difficult to set out an estimate of the sum total of the things the organizations have accomplished, but a few will later on be mentioned. The Farmers’ Union, with depleted numbers, is yet active in the state. The Alliance succeeded the Grange, absorbed the Agricultural Wheel, and passed away, leaving behind an Alliance flour mill at Denton, Texas, and other relics in name only, while the Grange is said to have yet a local organization in one county. But all three organizations have

made their impress on the political and economic life of the state. The farmers have been finding themselves, and, while their associations have been marked with lamentable failures, the agricultural classes have at the same time made progress, and have left undoubted evidence of good work, as shown in constructive reform measures, which, largely through their influence, have been enacted into law. At the same time, their coöperative business ventures, resulting in most cases in failures, have secured better treatment from merchants, and criticisms of railroad rates have proved beneficial to corporations and have led and are leading to a wide variety of reforms.

With its war cry of "Coöperation and Down with Monopolies!" the State Grange was organized at Dallas, Texas, October 7, 1873, with fourteen delegates present. Only a small number of local Granges existed in Texas at that time, though by January the number had increased to fifty-five; while in April following, when the State Grange met for its second meeting in Austin, Worthy Master W. W. Lang of Marlin reported an additional three hundred organizations. One hundred and twenty-one delegates, representing a membership of possibly twelve thousand, attended this meeting, among whom were the men who seem to have had most to do with the progress of the order in Texas. Chief among them were W. W. Lang, for seven years at the head of the Grange, and A. J. Rose of Salado, who after filling various subordinate positions succeeded to the Worthy Mastership. The secretary reported 1,184 active Granges in 1878, or nearly 50,000 individual members—all in Texas.

The minutes of the State Grange from 1873 to 1895, when

the treasurer reported a balance of \$10.97 only, tell the story of its rise and decline and at the same time disclose what the order was attempting to do. A recital of some of the more important recommendations repeatedly urged shows that the failure of the Granger movement in Texas did not mean that no good was accomplished. The Grange consistently opposed discrimination in rates, rebates, the promiscuous granting of free passes and other injustices practised by the railroads. A Railroad Commission now controls railroad rates, and free passes and rebates are prohibited by law. For a number of years following its organization, the Agricultural and Mechanical College paid little attention to instructing its students in agriculture and the mechanic arts. An indignant report made at one of the weekly meetings of the Grange says that "eighty-three boys are studying Latin and Greek, only three are studying agriculture." Repeated resolutions and wide publicity by the Grange doubtless helped to make the instruction of the school more practical. At the present time students in agriculture are largely in the majority. The State Grange also first recommended the establishment of a special school for training young women in the domestic arts. Texas now has a well-equipped College of Industrial Arts for women at Denton, and the classes in these subjects are crowded with students. Even in the early eighties the State Grange each year resolved that agriculture should be taught in the rural schools. A state law at present provides such instruction. Likewise, the uniform text-book law, for more than a decade in operation in Texas, was fathered by the Grange. The farmers of Texas, like most people, dislike to pay taxes. Continu-



HENRY EXALL

Founder of the Texas Industrial Congress for encouraging conservation of the soil
and increased crop production

ally they condemned all forms of oppressive taxation, particularly the tariff and the taxes on growing crops or unsold crops. The latter tax was abolished in Texas as a result of the Grange's insistent demand.

When 50,000 farmers, through their representatives, spoke their mind on political matters in Texas, the politicians soon came to pay attention. As soon as the members of the Grange realized this fact it gave them courage to express themselves, directed their attention to affairs of public moment, provoked discussions at their meetings, and proved of great educational value to people who might otherwise have remained uninformed on current political questions. Probably the greatest advantage the Grange possessed for its members was the opportunity its weekly meetings gave for social intercourse. The local lodge meeting, held perhaps at some lonely schoolhouse, was often made the occasion for an all-day picnic. People came for miles, bringing their entire families. During the secret exercises curtains were spread over the windows and the children and non-members were excluded. The discussions and literary exercises were, however, open to all, and at noon the contents of large lunch baskets were spread on the grass under the trees outside of the building. To many people the Grange served as the principal means of social intercourse with their neighbors.

The Grange, moreover, was of practical benefit to many of its members who patronized or took stock in coöperative stores fostered by the order in Texas. The most successful enterprise of this character was a wholesale storage and cotton factor's business operated at Galveston under the

managership, for most of the time, of J. S. Rogers. It started in 1878 with a paid up capital stock of less than \$250. Eventually the entire \$100,000 stock was taken, and the business amounted to over \$500,000 a year, with net profits of \$20,000. In 1887, in various localities in Texas, there were about 150 local coöperative stores affiliated with the Galveston enterprise, the total capital stock of which amounted to \$750,000. In a single year (1885) the combined sales of these stores reached close to \$2,000,000, from which profits amounting to \$250,000 were divided among the stockholders. These enterprises all failed, mainly for the reason that the principle of paying cash for goods, so earnestly recommended by all Grange literature, was not followed in practice. At Galveston in a single year \$40,000 of bad debts was charged off, and the rapid decline of the business may be easily traced by the equally rapid increase of the bills payable and bills receivable accounts.

The last report of the coöperative store at Galveston shows debts owing to the business in the form of notes and open accounts amounting nearly to \$80,000 on an outstanding capital stock of \$86,430. The profits for the year, although the sales had amounted to more than \$100,000, were reported to be \$143.87. Soon afterward the business was closed, and the various coöperative stores throughout the state not already suspended, suffered a like misfortune. The Texas Mutual Fire Insurance Association, after a career of ten years, in 1895 loaned its accumulated assets (\$10,024.95) at a low rate of interest to the Texas Coöperative Association in an attempt to save it. The final meeting of the Texas State Grange was held at Killeen, Texas,

in 1895, with only twelve members present. A. J. Rose and his wife, A. M. Kellar, James L. Ray, and a few others who had been active in Grange work almost from its foundation were present to witness its demise. The committee on the good of the order reported sorrowfully: "It would seem that the Grange has grounded its arms; has been sleeping in the fort as a shield behind which the farmers of the state could protect themselves against the gigantic combines that are sapping the foundation upon which agriculture rests," to which the Executive Committee added: "It sometimes seems that the farmers have surrendered—either to the monopolists or cranks."

So we must say that the Grange failed to lift the farmers "out of the old paths where they have been so long journeying." And yet its downfall was not an entire failure. It did make a solid contribution to the education of the agricultural classes, and its work was taken up by others. Its immediate death was occasioned partly by the failure of its various enterprises which went down because they did not sell and buy goods for cash; partly because it was the victim of men who betrayed to use the order for selfish or political ends; partly because no definite limited program was attempted; partly because too little attention was devoted to methods of cultivating and enriching the soil, terracing, diversifying crops, and farm management, and too much attention to governmental affairs which had little or nothing to do with prosperity; partly because, as their reports repeatedly pointed out, the social and educational features of the local meetings were practically given up, the discussions becoming more and more devoted to questions of

financial gain; and partly because of the rapid rise of the Farmers' Alliance movement.

To illustrate the wide diversity of the resolutions proposed and debated at the state meetings of the Grange, at different times they resolved: to sell cotton only direct to the manufacturer; to send only farmers to the legislature; to quit purchasing for the public schools any books published by Harper & Co., and to substitute in their stead the books of D. Appleton & Co.; to establish a coöperative bank; to manufacture all implements used on the farm; to establish a state fair; to endow a newspaper; to plant only one-third of the crop in cotton; to forward farm products by the shiploads direct to England, and to purchase manufactured products in England by shiploads in return; to establish a life insurance company; to establish a fire insurance company; to erect cotton compresses on the lines of all the railroads; to limit the amount of cotton to be planted by tenants, vagrants, and convicts; to "make your farm self-supporting and the cotton will furnish the luxuries of life"; to establish a model experimental farm near the city of Austin; to buy only Texas-made wagons; to establish a Grange agricultural college; to limit and reduce the charges of physicians. The Texas Legislature was memorialized to regulate railroad rates; to require the Agricultural and Mechanical College to give practical instructions in agriculture and mechanics; to pass a Sunday law; to teach agriculture in the common schools and colleges; to adopt a uniform system of text-books; to remove the tax on the products of the land while in the hands of the producer; to rescind the grant of 3,000,000 acres of land

paid for the erection of the State Capitol; to oppose a division of Texas; to reduce the consumption of intoxicating liquors; to protect the order from horse thieves; to adopt compulsory education; to adopt woman suffrage; to tax railroads for all outstanding stock; to enact an alien land law. The State Grange likewise demanded of Congress that Galveston be fortified and that its ports be deepened; that a heavy tax be levied on luxuries and removed from necessities of life; that the Commissioner of Agriculture be made a Cabinet officer; that national banks be abolished; that a line of mail steamers be operated from Galveston to the South American states; that speculating in cotton futures be prohibited.

The foregoing list could be extended practically without limit. There was an undoubted educative value in considering such widely diverse subjects, and lawmakers have, without question, been influenced through the publicity given to the questions discussed. It is possible, however, that the order did weaken, in many instances, by being diverted from its original purpose, and it is more than probable that the introduction of political questions did not always produce harmony and good feeling.

In 1879 the following report of the Committee on Horticulture was adopted by the Texas State Grange: "In consequence of the various ways of both cultivation and propagation of fruits, errors are produced and the result often sold to the unsuspecting farmer to his detriment. Among these are the Blackman Plum and the Texas Hybrid Blackberry and others when not budded or grafted on their own species of roots, that are not congenial stocks, thus produc-

ing often frauds and sometimes mules in vegetation with little or no seeds in them, thwarting nature's laws of reproduction. While the pulp of the different species of seedless fruits may be of the very best quality, yet it is only reproduced by budding or grafting; therefore,

“Resolved, That we recommend to Patrons of Husbandry that they buy no fruits that are experiments or frauds, and nothing but what has proved valuable. That we discountenance all stocks that are budded or grafted on entirely different stocks, such as the peach on the plum, the pear on the thorn, the pear on the apple roots, the apricot on the haw roots, the apple on the bois d’arc roots, and many other ways that are now being practised, because they are at best only experiments and may be frauds on the public. Our orchard fruits are our greatest health foods, and for this reason every Patron should have one. Our vegetable garden should be planted extensively so as to supply our need and should be cultivated well.”

The Farmers' Alliance, which became a national organization with millions of members, and from which sprang the Populist party—a party which unseated Governors, Congressmen, and United States Senators—had its origin fifteen miles northeast of Lampasas, Texas, in 1874. The founders were a group of farmers and stockmen who first banded themselves together for mutual protection against cattle and horse thieves and land sharks. One of their first declarations of purposes stated that they had formed the organization “To assist the civil officers in maintaining law and order.” Their constitution and ritual, even as finally revised, followed pretty closely similar Grange litera-

ture. At first, however, the order mainly devoted itself to exterminating thieves. This work they did through the operation of two men known as "Great Smokeys," whose functions were sacredly secret, but which might easily be guessed.

For five years the Alliance spread slowly and then was entirely suspended because of political jealousies among the members. In 1879 W. T. Baggett revived the organization at Poolville, Parker County, Texas. The first State Alliance met at Jasper Creek, Jasper County, Texas, June 12, 1880. The exercises of the state meeting consisted principally of reading lists of strayed stock, adopting an Alliance brand which was affixed to the jaw of the animal, and the routine of changing a constitution and electing officers. After a slow growth of six years an important meeting was held at Cleburne, Texas, in 1886, where eighty-six counties were represented. Some of the demands made at this meeting clearly indicate the early drift of the order: Congress was called on to prevent aliens from acquiring title to land, and to force aliens who had already acquired lands to relinquish them; to prevent the dealing in futures on all agricultural products; to put gold and silver on a parity and to pay the public debt; to substitute legal tender treasury notes for the issue of national banks; to establish a national bureau of labor statistics and to make the commissioner of the bureau a Cabinet officer of the United States; to pass an interstate commerce law. Many reforms in the state were likewise urged: that no person be allowed to purchase more than 320 acres of public school lands; that large bodies of land being held for speculative

purposes should be rendered for taxation at the same rate as the sale price of the lands; that the Attorney-General rigidly enforce the laws of the State of Texas; that convicts should be confined within the prison walls; that corporations pay their employees in lawful money; and that laborers be given a first lien on the products of their labors to the full extent of their wages. This meeting also declared that no person who owned any bank stock whatever should be allowed membership in the Alliance. A committee reported a plan for selling cotton in bulk through Alliance cotton yards. By the time the Alliance met again in 1887, at Waco, Texas, 3,500 local organizations were reported, with a total membership of more than 100,000. This remarkable growth had been secured under the leadership of C. W. Macune, who at that time became State President. Under his leadership also the Waco meeting decided to nationalize the organization and appropriated \$500 as a loan for beginning the work. The first national meeting was held the following year at Shreveport, La., with nine states participating. Mr. Macune became the first National President, an office which he held until he was elected editor of the Alliance organ, the *National Economist*, published for a number of years at Washington, D. C.

At the Cleburne meeting a resolution was passed calling on each Alliance in Texas to establish a coöperative store, cotton yard, and a lumber yard. As a result, many business enterprises throughout the state were organized with varying degrees of success. Some plunged immediately into financial disaster, while others lingered for several years. The general course of a successful business enterprise

of this character was that the stock quickly passed into the hands of a few enterprising individuals who devoted such time to it as was necessary to take care of it properly. The result has been that the name "Alliance" still is known in Texas in connection with gins, mills, and similar business ventures. A large flour mill at Denton, for example, yet perpetuates the name. Another plan of the Alliance was to choose five men in each county who were expected to meet merchants and dealers and to effect trade arrangements with them at low figures for Alliance members. The trade committee on their part would agree that the trade of the entire membership would be concentrated and placed with one merchant. The weakness of this system lay in the fact that no special advantage accrued to the committee for doing this service, and not many individuals were public spirited enough to work for nothing for a long period of time. The booking of large lots of cotton for sale to single buyers was also disastrously unsuccessful, largely because of the business inexperience of the promoters and the further fact that as a class the farmers were afraid to trust such enterprises, even to one chosen from among their own numbers. The largest Alliance enterprise in Texas was the State Exchange, with headquarters at Dallas, which proposed to sell cotton and other farm products and to furnish the Alliance members of Texas with all supplies. This corporation has a capital stock of \$500,000, only \$36,000 of which was ever paid in. C. W. Macune and R. J. Sledge were placed in charge of the business in 1887, and had some success the first year in helping the farmers to market their cotton. During the following year the Ex-

change proposed to advance supplies on farm products on a statement from the farmer showing the number of acres of land owned, its value and indebtedness, and the number of acres in cultivation. The statement further set out the amount planted in cotton, in grain, and the value of all live stock. On this simple statement the State Exchange, which was now lodged in a building costing \$35,000 and having a paid up capital of about \$56,000, advanced supplies aggregating \$400,000. On an average the collateral value of the security was found to be about 40 per cent. The business, therefore, failed with a crash that shocked the entire State Alliance. The beautiful paper theory was unfitted to practical business conditions. About this time the Alliance, not only in Texas, but throughout the country, became hopelessly entangled with the Populist party—in fact, was merged into the Populist party—and the Farmers' Alliance, as the true and beneficial agency of the farmer class which it was organized to serve, became the football of politicians and was no more. Local organizations were, however, preserved and continued to act in different parts of Texas.

An Alliance for negroes was organized at Lovelady, Texas, in 1886, by R. M. Humphrey, and spread rapidly over the South until it had a membership of more than a million. In Texas was established a number of business exchanges, the largest one being at Houston. Their course of financial disaster was even more rapid than had been similar projects among their white brethren.

The Farmers' Union, still in operation in Texas, whose scope has also become nation-wide, was born in 1903 at

Point, Rains County, succeeding the Farmers' Alliance. According to the judgment of some of the men who have labored earnestly in its behalf, like the Grange and the Alliance, it has been unsuccessful in converting the splendid ideals of the organization into practical reforms. For the past several years the Texas Union has been steadily decreasing in numbers and in influence, and it now seems impossible to secure from its officials any reliable data concerning its present numbers. Until very recently its membership numbered many thousands in Texas and its annual meetings were largely attended. Internal dissensions, the participation of its leaders in state politics, the disappointment of its members in failing to see quick results, the diversion of the movement to other interests, the common frailty of human selfishness, have all contributed to the decline of the organization. It may revive, though the opinion is common that its day of best usefulness is at an end.

The first state meeting of the Farmers' Union was held in 1904, and local unions have now spread throughout many parts of the country, especially in the Southern States. Newt Gresham, a newspaper man, and N. C. Murray, now living in Fort Worth, were two of the men who controlled the organization's early fortunes. Mr. Fred W. Davis, at present State Commissioner of Agriculture, was among the group of men who fostered the Farmers' Union in its palmy days in Texas. In what he claims the organization has done for the farmer it will be noticed that he stresses the political influence that has been brought to bear on the state and national governments. It may be seriously doubted, whatever laws are

passed, that legal enactments will afford the agricultural interests permanent good. No law will make a shiftless farmer diversify his crops, terrace his land, plow deep, or raise his own meat. The fundamental problems of teaching him to help himself and then through coöperation to help his neighbors, must come through the slower processes of education. Under a very well-conceived Texas law farmers may now organize themselves into money-lending associations for mutual uplift. They do not organize these associations. In other words, they do not trust each other. But let Mr. Davis tell what the Texas Farmers' Union has accomplished:

"The Farmers' Union, in the first place, revived the efforts of the Grange and the Alliance in behalf of agricultural education and coöperation. The Union has taken an active part in many progressive movements that have been made by the state and nation. It took the initial steps toward the erection of coöperative warehouses in the South. The efforts made by the national government on warehouses were merely endorsements of the Union's work. It also originated the movement toward creating a better understanding between the growers and manufacturers of cotton, the first concrete result of the work being the meeting between the cotton growers and manufacturers held in the month of May, 1906, in the city of Washington, D. C.

"The curbing of the wholesale gambling in cotton futures was initiated by the Union, both in Texas and in the National Congress. The first effort to teach the growers how to class cotton was made by the Union, and the first school of this kind ever organized was at Dallas, Texas, in August, 1906, under the auspices of the Union. The teaching of cotton classing in the Agricultural and Mechanical College was suggested by the Union. On two different occasions, due primarily to the Union's efforts, reductions were made in the freight rates on cotton. In the hearings on this subject ex-Governor Hogg represented the Union.

"In 1904, when cotton went to bed-rock prices, the Union did more than all other agencies combined in stopping the downward movement of the market, and millions of bales were held (estimated by Theodore

Price at 4,000,000) until the price advanced from six cents to ten cents or better. This advance was accomplished first by holding and second by reducing the acreage the following year something more than five million acres. In securing this reduction the Union played a leading part.

"The Union took a leading part in the creation of the Texas Department of Agriculture. The author of the law (Nelson of Kaufman County) was a Union man.

"The privilege of sending a man with one or more cars of perishable produce, to see that the same was properly iced and ventilated, and to divert the shipment in case it was not forwarded to the place originally designated, was secured primarily through the efforts of the Union. Cattlemen, banana shippers, and others have long enjoyed this privilege.

"The Union has done much to arouse the press and the general public to the necessity of using governmental agencies in behalf of the farmers of the country. It especially deserves first credit in all the efforts made by the state and the nation in behalf of the cotton farmers of the South. The warehouse and marketing law is the outgrowth of the Union's work. The Union took up the extension of the uses of cotton with the National Departments of Agriculture, War, and Navy. Hearings were had before President Roosevelt, Secretary of War Taft, Secretary of Agriculture Wilson, and others, and promises of coöperation were received."

It is in the local Institute, however, still another farmers' organization fostered by the State Department of Agriculture, that the best practical work is done. Here the farmers of the neighborhood meet together periodically and discuss the problems that arise in their localities, compare experiences, and take account of each other. These meetings of the local Institutes are productive of much good, according to popular report, fortified by the fact that the Institutes are constantly and rapidly increasing in number. They are not only serviceable in promoting the exchange of views and ideas, based on personal experience, but they would be compensated for if they did

nothing more than stimulate the social relations of the farmers.

While the Farmers' Union still claimed the attention of the majority of the agricultural classes in Texas, another organization, the Texas Industrial Congress, was effected, which had for its leader and evangel Colonel Henry Exall of Dallas, who gave his time without salary to the propagation of a few ideas which have been of great help to the rural population of the state. Colonel Exall's central notion was not that the government was robbing the people (the old political slogan) but, as he put it, that "the farmers of Texas are starving the soil, and robbing our grandchildren." He, therefore, went over the state giving talks on soil fertility and how to preserve it, good seeds and how to select them, rapid and thorough cultivation, diversification of crops, etc. To stimulate interest and to give practical demonstration of what could be accomplished, he offered through his organization \$10,000 in gold each year in cash prizes for the largest yield on a designated number of acres of a variety of crops. "If the contestants do not win a prize in gold," said Colonel Exall, "they will win golden experience which they can cash later on." In a single year fifteen thousand contestants entered for the various prizes offered. The beneficial results of these contests may be shown by the fact that in 1912 the general average per acre of various crops grown by the contestants was three times the state average. Year after year these contests were held, year after year Colonel Exall employed his entire time, and drafted too largely on his strength in his enthusiastic efforts to gain for the farmers larger net

profits, and, therefore, better conditions in their homes and better opportunities for their children. He became a martyr to his cause, dying suddenly in 1913. The influence of this one man, fired with all the fervor of a frontier minister, has probably contributed more to the welfare and progress of rural life in Texas than any other individual or associations of individuals. Besought to run for office, even the highest in the gift of the people, he would not draw away from his self-employed task. A bronze statue of him, heroic in size, should stand at the entrance of the Dallas Fair.

It is to be noted that the farmer is in late years depending less on such agencies as the Grange and Alliance, and looking more and more for aid from the Government. Even the Texas Industrial Congress collects money for its cash prizes from corporations and wealthy individuals and not from the farmer. Supplementing the large grants that come from the Department of Agriculture at Washington, the state through its extension activities in the University and the A. & M. College, the Experimental Station work, its own Department of Agriculture, and the Warehouse and Marketing Department, is spending unusually large sums to aid those who labor with the soil. Lecturers, scientists, teachers, work constantly and faithfully, and it is an easy matter for the farming class to secure any reasonable legislation. The promoters of the Warehouse and Marketing law, passed in 1915 by the legislature, believe that \$20,000,000 will be annually saved to the farmers of Texas through the adoption of the new plan of ginning and wrapping cotton, and that by coöperation

in marketing, made possible by the warehousing system, another substantial saving can be brought about. It is likely, however, that years will elapse before the good advice of the managers of the Warehousing and Marketing Department will generally be observed. The best aid to the farmers must come from within, and his best friend is education and not legal enactments. The farmer plants too much cotton and grows too few hogs and too many dogs (there is said to be more dogs than hogs in Texas); he attempts to cultivate too much land; he is slow to act with his neighbors in marketing his products. These are his big problems; but changing him and solving his problems require both time and education. And, after all, no one else can do the work for him. The farmer isn't in truth so very bad off; and wherein he needs saving he must save himself.

Much has been written in this book about the farmer, because in Texas there are so many of him. By no means all of them are reformers or in need of reform. A large percentage are prosperous and contented. They own bank stock, educate their children, and ride to church in automobiles. Such men waste precious little time denouncing the government or listening to prejudiced or flattering appeals for votes from skyscraping orators. The Taft ranch near Corpus Christi, containing 100,000 acres in cultivation, 5,000 people, 25,000 head of live stock, four farms, where modern methods of cultivation are in vogue, does not ask for governmental aid. Nor does Billie Minter, who grew in an Austin backyard, on a plot of ground 10 x 20 feet, 573 pounds of vegetables at a net profit of \$28.32, or



GORDON E. NORMAN



WALLACE MCGEHEE



EMMA D. STOKES



J. L. NORRIS

Prize winners in Texas Industrial Congress Crop Raising Contests, in which \$10,000 in gold is distributed each year



ANDREW CAREY



BILLIE MINTER



EDNA AND LOUISE TAYLOR



ANNIE LOU DARBY

Prize winners in Texas Industrial Congress Crop Raising Contests, in which \$10,000 in gold is distributed each year

\$6,000 on an acre; nor would the average Mr. Farmer, we repeat, if he would stop ridiculing all new things, fighting road and school taxes, mortgaging his crops. Farmers are not the best people in the world, though they are as good as the best. Dishonesty, ignorance, immorality, laziness, exist in the country as well as the town. The farmer is the pillar of civilization because of his job, not because he is particularly meritorious. We are all mere mortals, after all, farmers included.

CHAPTER III

FARM TENANTRY

"Texas has two hundred and thirty thousand tenant farmers. No more important question confronts the statesmen of this age than the bringing of our vast tillable areas into the absolute ownership of the man who will in person cultivate the soil. . . . Build the small home and the republic is safe. . . . Did you ever hear of a man taking his gun and defending his boarding-house? . . . If in this country those who have and can do for others continue to lose sight of the great need of a homeless people, they are inviting trouble which may grow all too soon to a degree too serious to contemplate. . . . The number is increasing who demand that the government take control of the lands of the country. . . . The prevention of the growth of this idea . . . lies in the removal of the . . . necessity for such doctrines. Let those who rely upon the supposed security of property rights remember that no government right is more sacred than the integrity of the people who maintain that government."—*Governor James E. Ferguson.*

IN MANUFACTURING, in mining, in transportation, and, to a less extent, in commerce, everybody knows that most of the workers are not owners but are serving either for wages or salaries. Hence the dependence of so many townfolk upon the weekly pay envelope, hence much talk concerning the independence of the farmer toiling upon his own land and resting under the shade of his own vine and fig tree. Alas! the farmer is often as dependent as any city dweller. The vine and the fig tree that he sits under (if perchance there be any to sit under) are often not his own; he owes his local merchant too much; his crop is mortgaged before it is raised; he pays high rates of interest; he neither buys nor sells under proper conditions. For these and other reasons he is becoming a tenant—or,

worse, a "cropper"—with a rapidity that is the most unpleasant feature in the economic life of Texas to-day.

In round numbers, 810,000 males are engaged in agricultural work; 375,000 are classified as laborers, and the remaining 435,000 are about equally divided between owners and tenants. The majority of those classified as laborers are probably the children of farmers, although more than \$30,000,000 is paid annually to the farm hired man. In other words, about one agricultural worker in four is a farm owner, one a farm tenant, and two farm laborers.

Even the farm owner is somewhat burdened with a farm mortgage. On the average one farm out of three is mortgaged to the extent of one-fourth of its value, the total mortgages amounting, however, to less than \$100,000,000, about 4 per cent. of the value of all the Texas farms.

The tenants, over 200,000 in number, fall into two fairly distinct classes, the real tenant and the "cropper." The real tenant furnishes his own tools and work animals and pays only a third or a fourth of the crop for rent. In rare cases he pays a cash rent and keeps all of his crop. The "cropper" depends upon his landlord for everything needed to raise the crop which is divided equally. He is virtually a hired laborer, and sometimes might be better off working for wages than running the risk of crop failures.

Too much importance can scarcely be attached to farm tenantry. Scarcely a generation divides to-day from the time when land was given away freely by the state to actual settlers. Yet already about half of our native white farmers are tenants! It is rather strange that this vital question did not enter the political arena until the gubernatorial

campaign of 1914 when it apparently affected many votes. In fact, tenantry received very little consideration from public men until Governor Ferguson, much to his credit, forcibly brought it to general public attention by making it his chief campaign issue. Having come into public consciousness, it is likely to remain there for a long time, since a complete cure seems to be impossible and even amelioration difficult.

The improved land of Texas is at present cultivated as follows: 1,000,000 acres by negro owners; 2,000,000 acres by negro tenants; 15,000,000 acres by white and Mexican owners; 13,000,000 acres by white and Mexican tenants.

Next to the negroes, native white Americans exhibit the largest percentage of tenantry. Messrs. Leonard and Naugle find after much investigation that in Texas the European farmer passes more rapidly from tenant to owner than the native American, and that a far larger proportion of the latter remain tenants permanently. The European farmer is not superior to the better American in these respects; he is, however, superior to the average native farmer, and buys land even under present economic handicaps.

NUMBER OF FARMERS IN EACH THOUSAND

WHO ARE	NATIVE	FOREIGN BORN	NEGRO	TOTAL
Owners . . .	385	40	51	476
Tenants . . .	379	29	116	524
	764	69	167	1,000

The number of negro tenants, usually above 60 per cent., runs as high as 85 per cent. in the large fertile river valleys. The number of white tenants is greatest, from 60 to 70 per

cent., mainly in the densely populated high-priced Black Prairie region. Tenancy follows good land, whether the community be new or old. The negro, however, is not yet a severe competitor of the white in the "black waxy" land but is coming to be. However, a small percentage of tenants is not necessarily a good social sign; it may mean, as in the Mexican counties, a large percentage of farm laborers. The real farm tenant is mostly preferable to the mere farm laborer. Texas with her many tenants may be better off than the states with fewer tenants and more farm hands working for wages.

Since Mexicans and the foreign-born do not furnish their proportion of tenants, if we classify the total population into whites and negroes in our tenantry statistics we shall get under "whites" figures that underestimate rather than magnify the amount of tenantry among native white Americans.

To see how white tenantry is growing, note the following table where the 1915 figures were obtained by adding half the increase between 1900 and 1910 to the 1910 Census figures:

NUMBER OF ACRES IN EACH THOUSAND OF IMPROVED LAND

CULTIVATED BY	IN 1910		IN 1915	
	WHITES	NEGROES	WHITES	NEGROES
Owners	555	344	524	344
Tenants	445	656	476	656
	1,000	1,000	1,000	1,000

If the number of farmers be considered rather than the acreage cultivated by them, the results are not very different.

NUMBER OF FARMERS IN EACH THOUSAND

WHO ARE	IN 1910				IN 1915			
	WHITES		NEGROES		WHITES		NEGROES	
	TEX.	U. S.	TEX.	U. S.	TEX.	U. S.	TEX.	U. S.
Owners	508	693	305	264	490	680	303	260
Tenants	492	307	695	736	510	320	697	740
	1000	1000	1000	1000	1000	1000	1000	1000

If these 1915 estimates are correct, there are already in Texas more white tenants than white owners, more native white tenants than native white owners. Moreover, if tenantry increases as fast between 1910 and 1920 as it did between 1900 and 1910, more land will be cultivated in 1920 by white tenants than by white owners.

As is to be expected, the owned farms are larger and more valuable than those cultivated by tenants. The average farm owned by a negro is a third more valuable than the one rented by a negro tenant, the white-owned farm is twice as valuable as the farm rented by a white man.

"A nigger, forty acres, and a mule" is strictly fulfilled in Texas, where the average negro farm, owned or rented, is but a trifle over forty acres, and there are 70,000 mules on the 70,000 negro farms. Unfortunately the negro doesn't own his forty acres more than one time in three.

Only one-twentieth of the value of all farm property is on the negro-operated farms. Since only one negro in three owns the farm he operates—one in four is the United States average—the darkies own only one-sixtieth by value of all the farms, although one-sixth of all the farmers are negroes. Compared with his colored brethren in the other Southern States, the Texas negro owns more farms, which,

on the average, are somewhat more valuable. In Texas or out the negro does not own very much, yet appears to be making slow gains.

In percentage of white farm tenants Oklahoma easily leads the other states. This is due to the Indian ownership of so much of the land. Exception being made of Oklahoma, Texas and Georgia are nearly tied for first place in this white tenancy race, a perceptible difference dividing them from the remaining states. Texas alone has one-tenth of the native white farm tenants of the whole United States. Counting negroes and whites Texas, owing to a smaller percentage of negroes, has less tenantry than five other Southern States. It is to be feared, however, that in white tenantry Texas exceeds Georgia and is second only to Oklahoma. No wonder that the question of farm tenantry is coming to the front and patriotic Texans are searching for its causes and its remedies. The question has been studied not only by Governor Ferguson but also by Hon. F. C. Weinert, State Warehouse and Marketing Manager, by Messrs. Austin, Leonard, Haney, and Wehrwein of the University of Texas, and by their students, and what follows here is very largely based upon their work.

Popular explanations of the tenant problem place all the blame either on the landlord or the tenant. According to one view the tenant is poor because he is lazy, thriftless, and without ambition or foresight or prudence. According to the other view landlords are greedily forcing up rents, are insisting on the raising of nothing but cotton, are demanding high interest rates, are non-residents, are against schools and other healthy community life, and are holding

land at impossibly high prices. Alas, there is partial truth in each view: some tenants are very inefficient and some landlords are very grasping.

The very rapid rise in the price of land, together with the increased cost of the equipment needed to cultivate it properly, is the great and almost sufficient cause of the increase in tenantry. This has operated to retard ownership in two ways. Directly, it simply costs more than formerly to buy an acre of land. Indirectly, the increased value of the land has almost forced the landlord to demand higher rents which of course tend to prevent savings on the part of the tenant.

The rise in rent is plainly shown by the coming of the "bonus," already frequent but by no means universal. The bonus is rent in addition to the customary one-fourth of the cotton and one-third of the other crops. This bonus, also partly due to competition between renters, is sometimes in the form of money, sometimes in the form of agreements to pay part of the taxes or buy supplies or stock from the landlord. Sometimes a third of the cotton is paid in place of the customary fourth.

According to Professor Leonard, despite the increase in the prices of farm produce, "the financial ability of the tenant has not kept pace with the increase in the outlay necessary to equip a farm." "To supplement this shortage in capital the tenant must resort to credit." Unfortunately, in Texas all interest rates are yet high and the tenant, with little or no security to offer, is charged almost prohibitive rates. A better rural credit system is one of the most fundamental needs of Texas. It would help all but the most inefficient.

The inefficiency of the tenant, the increase in the price of land, bad credit conditions, and bad marketing arrangements are the four great causes of tenantry. As Professor Leonard says, "There is an upper third of tenants who under present conditions are fairly prosperous. They are capable farmers and good business men. They are acquiring property even in high-priced land. Among them are to be found nearly all European farmers and many native Americans. Landlords are competing sharply for their capable services." Below a middle third of fairly good farmers but poor business men there lies a lower third where "the real tenant problem is localized. It is composed of a migratory thriftless body of men not unlike the casual unskilled workers of our cities." Incapable, untrained, careless, often lazy, affected with hookworm, eating poor food very badly cooked, living in uncomfortable and crowded "shacks," victims of typhoid and ignorance, and money lenders, these submerged tenants are the modern representatives of the "poor whites" of the old South. The major evils of tenantry are largely confined to this group and to the negroes and Mexicans.

These grossly inefficient whites, negroes, and Mexicans furnish most of the nomadic "croppers" who migrate each year from farm to farm. They also furnish many farm laborers; their inefficiency is a main cause of a present tendency on the part of landowners to cultivate their land by means of hired labor rather than by tenants. They are the victims of the chattel mortgage at high interest, and of high prices because their credit is bad. They are also the victims of more capable but unscrupulous men.

The general public unfortunately is not yet sufficiently interested in the welfare of this submerged third, and schemes of reform have just begun to be seriously discussed.

Left nearly unaided by those who might help them, the tenants do not seem to be able to help themselves by any successful system of coöperation. Says Professor Austin: "Texas is suffering from sociological poverty. To make a living has been easier than elsewhere, which is not conducive to strong or united social action." Sometimes, unfortunately, rural dwellers are more suspicious of their neighbors than they are of strangers. Associations of farmers when formed are very hard to hold together.

The financial condition of the tenant is exhibited with remarkable clearness by some statistics gathered by Professors Austin and Wehrwein in the rather widely scattered counties of Robertson, Brown, Matagorda, and Fort Bend. Tax renditions, rather unreliable except when it is a question of counting vehicles or heads of stock, revealed the fact that in each county the average tenant rendered about \$300 of personal property. This included on the average less than three horses, three head of cattle, and two hogs. Making all possible allowance for defective renditions it is plain that the average tenant has considerably less than \$1,000 worth of property in those fairly typical counties. This is a small beginning toward purchasing a farm were it at all available for the purpose.

It also appears that a vast majority of the many chattel mortgages (which bear very high rates of interest, 20 per cent. sometimes) based upon this \$300 of rendered personal property (worth \$600 perhaps) are made in winter and

spring, and nearly all are paid, if paid at all, in September and October, when the cotton is sold. Owning less than \$1,000 of personal property, selling the crop in October, and beginning to borrow in January are three big facts that tell the tenant's sad financial story.

This chattel mortgage system is a Southern habit and means economic bondage and misery. Such mortgages exist by thousands and for small individual amounts. Sometimes they are made to get needed equipment, more often they are made to buy clothes and groceries from a store. "Where the farmer depends on the grocery, there is the chattel mortgage." Credit is in fact too easy. Bankers and merchants take great risks and charge high interest and profits. Loaning money to many tenants is not attractive even at high rates. A farmer often arranges with his local merchant either to buy on credit from January to October at cash price plus 10 per cent. for interest till October, or to make a note for, say, \$200 at 10 per cent. to cover everything purchased till the crop comes in. Either way, much more than 10 per cent. interest is obviously charged. This chattel mortgage and borrowing habit is not a necessary feature of the one-crop cotton situation. Undoubtedly, however, the lenders of money perpetuate the one-crop system by regarding cotton as the best crop for security, which, under present conditions, it probably is.

The preference of landlords and merchants for mortgages based on cotton is not due solely to the fact that cotton is a "money crop." The average tenant in Texas is more likely to be successful with cotton than with any other crop. Moreover, it is not so easy for the dishonest or careless

tenant to get more than his share of the cotton by eating it or feeding it to the stock. Finally, cotton is relatively easy to store, neither rats, mice, nor other "varmints" eating it.

Rental contracts are mostly verbal and are for one year only. A third of the tenants move every year. Sometimes the moving is for cause, sometimes in mere obedience to an unhealthful roving tendency. Short-term contracts and roving habits are ruinous. The shifting tenant is usually shiftless. Roving checks soil conservation, decent houses, interest in schools, and all other permanent upbuilding of the community.

A standard rental contract is much needed. For rural progress it is essential that long-term renting be encouraged, and that equitable compensation for improvements made by the renter should become a fixed custom or be regulated by law. Texas has much to learn from European countries in this matter. At present landlords complain of the destruction of property by renters quite as often as tenants complain of poor houses. Says a tenant: "I would to God you people could see just what kinds of huts the renting class live in"; says a landlord: "If I should put screens in they would be broken out in half an hour." The good landlord in general attracts good tenants, the worst class of tenants gravitate toward the worst type of landlords. Between the extremes all sorts of combinations exist, and what the average situation is no man knows. A worthless tenant on one farm may recklessly damage a good house provided by a generous landlord while on the next farm an avaricious landlord is cheating a helpless tenant. Tenantry is simply

another case where all sorts and conditions of men are involved.

Professor Leonard has studied in Ellis County the tenant as a producer and finds, after deducting rent and wages, an average production of about \$1,000 a year. Although this represents the labor of the whole family, it is to be feared that this \$1,000 is in excess of the state average. In general the tenant does not use either his time or his money to the best advantage. Farm machinery is purchased either too much or too little and its depreciation is very great because most of it is left entirely exposed to the weather.

Most tenants are hard workers. They spare neither themselves, their wives, nor their children. Some, of course, are lazy and shiftless. Nearly all are desperately in need of an education that will enable them to compete on equal terms in the modern world. His own inefficiency, high-priced land, grasping landlords, high interest rates, poor crop years, bad roads, defective marketing conditions, rapidly changing economic conditions, have all done their evil part to impede the tenant's progress.

Naturally there is a good deal of discontent and the tenant is likely to blame conditions more and himself less than he ought. Comparing the easy conditions of frontier days with the more adverse present, the tenant is convinced that he is far less fortunate than his father. Discouragement is frequent and even hopelessness is to be found. "Most renters," says one landlord, "have been renters for years and make no effort to become anything else." Says Governor Ferguson: "A tenant in Bell County has about one chance in fifty to become an owner." The competition of

the negro and the Mexican is being felt; the bonus is a source of disquiet; the tenant in general feels that his chances of success are decreasing.

The discontent is largely unorganized and as yet has led to but little collective action. A tenant's union has been formed, but so far it has not accomplished anything. To check, to reduce, to abolish, the evils of tenantry is a gigantic task. The evils will grow unless sound remedies be applied. Although there exists no single or universal remedy for evils so complicated, it is easy to propose reforms that will lead to better things, but it is very hard to put the reforms into active operation.

All competent students of tenantry turn to the school-house on the hill as the only general and ultimate remedy. But the school is so very slow-working. Years will be required to perfect the compulsory education law, to establish rural high schools, to consolidate the scattered country schools, to fit the curriculum better to social needs, and, above all, to train up a set of thoroughly competent teachers. Better schools will produce a more efficient citizenship, which in turn will cause the passage of wise laws that will cure those evils that may be remedied by legislation.

To Governor Ferguson belongs the credit for the only directly remedial legislation that has been passed so far, a law making it usury with the usual penalties to charge ordinary tenant rents in excess of one-fourth of the cotton and one-third of the grain. This law, regarded by him as merely the beginning of reform, he defends in the following words:

“There can be no difference in principle between the man

who charges an exorbitant price for the use of his land and the man who charges an exorbitant price for the use of his money. Both commit a wrong against society, and if there be any difference in degree it is in favor of the man who loans the money, because he takes some chance in getting his money back. The right of the government to regulate rents is as well established as the right to regulate interest."

A number of other reforms are approaching or reaching the legislative stage. These have been listed and summarized by Professor Haney somewhat as follows:

(a) Establishment of land courts to arbitrate rents, to encourage long tenure, to provide for compensation for improvements made by tenants, to facilitate collective bargaining and, in general, to standardize and make equitable the rental contracts. Such courts would be a great innovation but could do much good.

(b) Special and graduated taxation of large land holdings, of future increments in land values, and of inheritances. The object of such taxation being to equalize opportunities by taxing strictly unearned incomes.

(c) Modification of the Robertson Insurance Law, of the Homestead Law, and of the present system of registering land titles. The first helps to keep up the interest rate, the second restricts the credit of the small homesteader, the third makes land transfers difficult and expensive.

(d) Establishment and strengthening of agencies that will promote self-help, coöperative marketing, diversification of crops, conservation of the soil, better living conditions, and better human relations between owners and tenants.

More radical proposals of course are not lacking. Single-tax advocates have not been silent, and socialists argue for the abolition of private property in land. All are agreed that the situation is getting worse and that something must be done or very grave evil will result. "The land problem is but one phase of a complex mass of imperfections and maladjustments which make up the larger social problem—a problem that will always be with us as long as men so multiply as to press upon the existing means of subsistence." If moderate remedies do not succeed in abating sufficiently the evils of tenantry it is certain that more radical ones will eventually be tried.

The evils of tenantry are so great that we may be permitted to rejoice that it is still possible if not probable for a tenant to become an owner; that, to take a single example, Mr. J. R. Hill of Haskell raised on a one-man farm last year a crop of wheat and oats that netted him \$5,368 after paying one-third of his crop for rent. There is a silver lining even to the tenantry cloud.

CHAPTER IV

COMMUNITY LIFE

"The operation of the Texas homestead law makes death a luxury, not only to the debtor, but also to the ruined creditor. It is said that it enables the bone and sinew of a country to feel calm and serene in the presence of an execution for debt, and encourages the honest farmer to defraud the merchant who sells him goods on credit. . . . He can afford to be courteous to those who dun him, to be even jocular with them on the subject of his debts. He invites them to go through his house and see the modern improvements he has introduced at their expense. This is the reason that the facilities for amassing a fortune in Texas are so profuse. Nowhere else can a man, on such a small capital, and in the same length of time, reach to such affluence as the homestead law enables him to attain in Texas. Circulars inviting immigration to Texas, and describing the advantages of the state, never fail to draw a touching picture of the beauty of the homestead law and the facilities it affords for evading the absurd and antique practice of paying debts."

—Sweet and Knox's *"On a Mexican Mustang through Texas."*

FROM the time Austin's colony was settled at San Felipe, social life in the group that made up the village settlements was not very much unlike that of other American towns. For the men there was the store gossip and the ever-present saloon; for the women the sewing circle; a little later came the church, the school, the town hall, the courthouse—all serving to bring people together where they could act as a unit. In the outlying country districts, because of the lack of transportation facilities, the scarcity of newspapers and books, the distance between the cabins, and a climate that made the out of doors popular, there prevailed distinctive customs and practices, some of which have endured until the present.

Of the social life of Texas cities little can be said that would not be generally true of any western state.

Concerning community gatherings in early days much interesting material is found in the personal reminiscences of Noah Smithwick, who came to Texas in 1827:

"The biggest time we ever had was on the occasion of a double wedding, the brides being a couple of grass-widows who were domiciled together just out of town, their comfortable home and reputed bank account being an irresistible attraction to a couple of good-looking young scamps who were hanging about; hence the wedding. The boys all got together and went out to charivari them. It was my first experience in that kind of a performance, and was unquestionably the most outrageous din I ever heard; cowbells, cowhorns, tin pans, and in fact everything that contained noise were called into requisition, and with their discordant sounds mingled hoots, howls, and caterwaulings enough to make the hair rise on one's head. But all our efforts to bring the happy quartette out proved abortive. We overdid the thing and frightened them out of their wits; so after exhausting every device short of breaking in the door and dragging them out, we adjourned to town to wind up.

"The Masonic Hall was dedicated on the 24th of June, 1855, a grand barbecue and ball being among the attractions. The dinner was free to all and consisted of everything the country afforded, and was in such abundance that after all who would had partaken freely there were quantities appropriated by the outside element. I saw one fellow who I knew had not contributed one cent to the dinner ride off on horseback with a quarter of roasted beef on his shoulder, upon which, with the assortment of cakes, pies, etc., his thrifty helpmeet had collected from the table, the family no doubt feasted for several days.

"The houses of the early Texans were small, but their hearts were large enough to cover all deficiencies. No candidate for hospitality was ever turned away. After the danger from Indians was over we had all out of doors in which to entertain our friends. If there was a wedding, everybody was invited and a long table set out in the yard, around which the guests stood while partaking of the cheer with which it was loaded. Then if the bridegroom had relatives they gave an

'infair' on the day following the wedding, at which the outdoor dinner was repeated.

"Among the early social events I recall an infair given by William McGill to his nephew, Louis Thomas, and bride, Miss Kates; also a dinner given by Logan Vandever at the closing of school, which was the pride of the town, besides several Masonic and Fourth of July dinners. These free-for-all dinners were discontinued after a few years; the hungry hordes that swarmed in from all parts of the country, not content with a hearty dinner, filled their pockets, reticules, baskets, and handkerchiefs with the desserts furnished by the ladies, till they went on a strike at the imposition, and after that only those having the password gained admission.

"Barbecues were a feature of all political gatherings, the most notable one in that part of the country being given at the Marble Falls on the Fourth of July, 1854, prior to which time only the sound of the water leaping down the successive steps of the falls, and the voices of occasional small parties that had visited the spot, had awakened the echoes of the surrounding hills.

"Preparations on a scale preponderate to the place and the occasion were begun several weeks in advance. Meetings were held, committees appointed with power to levy contributions indiscriminately, everybody cheerfully complying with the demands thereof and faithfully carrying out parts assigned. The mills were called on for flour, and some of the Mormon ladies who were famous cooks manufactured it into bread. The Burnet merchants gave freely of their groceries. Old man Lirston, who lived on the creek which bears his name, a few miles below town, was put down for a wagonload of roasting ears; other farmers brought wagonloads of watermelons and cantaloupes, together with such vegetables as were at hand. Huntsmen brought in venison and wild turkeys, and beef and pork galore were advanced. Nor were more delicate viands wanting; there were pound cakes worthy of the name, warranted full weight, that deluding inflationist, baking powder, not having as yet found its way into that neck of the woods. There were wild grape pies and dewberry pies and wild plum pies; as yet there was no cultivated fruit except dried fruit, which was very scarce and high.

"Several families from Burnet, among them the Vandever and McGills, ever foremost in such enterprises, went down beforehand and camped on the ground to superintend the final arrangements. There was a wide-spreading arbor covered with brush beneath, seats and a speaker's stand were arranged, the ground being carpeted with a thick

layer of sawdust, which served for a dancing floor. People came from far and near, on foot, on horseback, in carriages and farm wagons. None stayed away for the want of conveyance, and the seating power of the spacious arbor was taxed to its utmost.

"The first number on the program was a national salute fired from holes drilled in the rock. The band, consisting of a lone fiddle manipulated by Jabez Brown, played 'Yankee Doodle' and 'Hail Columbia,' the only national airs in his repertoire.

"The literary exercises began with the reading of the Declaration of Independence by the young son of the writer, a lad of fourteen, one of Professor Dixon's pupils, whom the professor had carefully drilled for the occasion.

"Doctor Moore, the orator of the day, then took the stand. He was as long-winded as a silver senator. His stentorian voice rolled out from his perspiring visage, contesting with the falls, while his rotund figure shook with the energy of his gesticulations. The sun mounted the zenith and, stooping far over to the westward, peeped curiously over to the westward to see what all the noise was about. Still the doctor's stentorian voice rang out the pæan of liberty over the nodding heads of his weary audience, mingling with the roar of the water and reverberating among the distant hills. At last it was finished, and the famished multitude made a rush for the dinner which had long been waiting, the odor therefrom aggravating the impatience of the throng, to a large number of which the dinner was the principal feature of the occasion, they apparently having risen early and breakfasted on the anticipation of the feast. But there was enough and to spare for supper and breakfast for those who remained to participate in the sawdust dance which closed the performance. Long before the night a space was cleared and Jabez Brown took his place on the stand and sawed out reels, which he also called, until daylight the next morning, occasionally varying the program with singing, in a strong, musical, though uncultivated voice, 'The Maid of Monterey,' and 'The Destruction of *Sennacherib*.'

"It was the greatest event the country had ever enjoyed, and we did have a royal time, some of the participants remaining on the ground several days later, presumably to live it all over again in imagination."

"The first meal I had in Texas," writes an old pioneer, "was composed of dried venison sopped in honey." This

delectable diet indicates pretty clearly the scantiness of the elements in early Texas days, as in all pioneer countries, that made life particularly hard on women. As one old woman of these times remarked, "Texas is a heaven for men and dogs, but a hell for women and oxen." The oxen did the rough labor of hauling, while the women performed the equally arduous task of making their cabins a real home under impossible conditions. Despite such conditions, however, the people from the first had some social life. The young folks enjoyed square dances on a rough puncheon floor or even a smooth place of ground swept clean for the purpose; or, when church rules forbade too strongly, substituted play party songs for the sinful fiddle. The tunes of "Weevilly Wheat," "Shoot the Buffalo," "Johnny Brown," "Hog Drovers," and other similar songs sung to dance music, are yet well known among the descendants of the early settlers. A wedding and a big dinner often resulted from this mingling of young people, an infair, or dinner, being given on the day succeeding the ceremony—followed perhaps by a charivari at night—to which were invited all the people of the community, as Champ Clark invited all Missouri to the wedding of his daughter in the summer of 1915. The people also met from districts embracing the territory of a hundred miles in radius at barbecues where for twenty-four hours preceding the feast whole beeves, hogs, sheep, and goats were roasted on wooden spits in the open air. Such customs had the effect of unifying the lives of the people, of bringing them together for social intercourse and for the discussion of public affairs.

The character of the people who first settled Texas has

been much misunderstood. It is true that a small percentage of persons who had fled from the states desired for one reason or another to keep their identity concealed. As a cowboy song says: "My name is nothing extra, so that I will not tell." It is yet a joke in Texas that it is a form of impoliteness to ask a man what his name was before he came to the state. It must be remembered that Texas was settled when duelling, though forbidden by law, was yet a common practice in the South. Some of the pioneers were successful duellists who had fled from their homes because their opponents had fallen before their aim. At this time, moreover, laws in some states still put in prison persons who were unable to pay their debts. Others of the pioneer class were, of course, people who had either wittingly or unwittingly violated the law and wished either to continue their lawless course or to reform amid strange faces and new scenes. Still another class of settlers were restless adventurers, young and old, who found in Texas an ample outlet for their adventurous spirits. They loved the plains as sailors love the sea. A large percentage of settlers were, of course, seekers of agricultural opportunities in a new and fertile land. They wished homes for their sons and daughters; the West called them; they were best satisfied when their neighbor did not live too near them. One settler, in explaining why he was moving on farther west, declared that the country was "getting crowded," for, said he, "I have just heard that a fellow has settled on a claim ten miles from my home." The very hardships and inconveniences of the life made it more attractive.

One of the great factors in bringing the country people

together, even when they had to travel as far as fifty or one hundred miles overland, were the camp-meetings, conducted mainly by the Methodist Church, though the Baptist Church and other churches also held this particular character of meeting. The facilities at these camp-meetings were of the crudest kind. The place of worship was under an arbor of green branches built usually in the woods, with water handy. In early days people came from far and wide to attend these meetings, bringing with them food to last from one to three weeks. The women slept in the covered wagons, the men lying on the ground in the open or under the trees, the children, a promiscuous bunch, usually making their beds in the straw of the altar used by the "mourners." At night surrounding towns and villages sent out their share of auditors. The services kept the campers busy throughout the day. A sunrise prayer meeting was first held, then at nine o'clock "experience" meeting; next a sermon at eleven; an afternoon service at three o'clock; a "grove meeting" service at sunset, in which the men held their service separate from the women; and, finally, the night preaching, where, before crowds of eager listeners, the most eloquent minister available held forth. All the services were followed by a prolonged singing of well-known camp-meeting songs. The effect of some of these songs is thrilling even in remembrance. Through the powerful exhortation of the minister "calling up mourners," followed by a period of singing on the part of the entire audience, large numbers of "mourners," or penitents, were induced to come to the altar to kneel for prayer. Here, under the spur of emotions aroused by the fervid songs and

by the earnest admonition and entreaties of the church people who went about talking to the "mourners," numerous professions of religion were made. Before the night meeting broke up it was not unusual for some of the "mourners" and some of their friends to "get happy" and shout. For those who have witnessed such scenes it is almost a sad reflection to think that they are common no longer. The flickering campfires in the forest, the flaring kerosene lamps surrounding the brush arbor, the group of earnest faces lit up mainly by religious fervor, the weird music, the impassioned appeals of earnest exhortation, the exultant shouts of those made happy were, until the early nineties, a common experience throughout practically all Texas wherever the Methodist circuit rider went; and he kept up despite meagre financial support, even with the smallest settlements, where in the summer season you could find him holding camp-meetings, and throughout the year filling regular appointments on "circuits" larger than some of the New England States.

The whole-hearted hospitality of the Texas pioneer, and especially of the cattleman, is one of his most widely known characteristics and one which can even yet be proved by actual experience with these generous-minded men. No traveller was ever charged for food and shelter for himself and team when he stopped for a night's lodging at a ranch house. Indeed, travellers often gave offense even by offering to pay for such accommodations. He must always give the call "Hello!" and be answered before dismounting from his horse. Civilization and greed for money have

not until now greatly changed in this respect the nature of the cattleman. Recently a company in southwest Texas, after a long day's ride, came upon a lone ranch house. The doors were closed but unlocked and no one was at home. Upon going in they found a note addressed to any traveller saying that cooked food could be found in the pantry and feed for stock in the unfastened barn. All comers were directed to help themselves freely and to cook other food as needed; and it is a credit to humanity that such hospitality is rarely abused.

The Texas cattleman is not only hospitable but he is a liberal giver and a free spender. John Timon, a wealthy cowman of San Patricio County, used to advertise, "All honest, industrious poor men are welcome to kill an occasional calf, provided they do not waste the meat." The old type of cowman still survives in Texas. While he does not advertise publicly his willingness to give away calves for beef, it is at the head of almost every subscription list for the benefit of churches, colleges, and charity that you will find the names of cattlemen who have husbanded their resources and grown rich on the proceeds of broad acres of ranches, thousands of Herefords, and from bank dividends where they reign as presidents. Some of them have grown to be millionaires. Among the better known wealthy cattle owners are Mrs. Richard King, Kingsville; George W. Littlefield of Austin; C. C. Slaughter, Dallas; Lee Bivens, Amarillo; R. R. Russell, San Antonio; S. B. Burnett, Fort Worth; Ike T. Pryor, San Antonio; Joe Jackson, Alpine; J. D. Suggs, San Angelo; Ed. C. Lasater, Falfurrias; Tom Waggoner, Fort Worth; John J. Welder, Victoria; James

C. Welder, Victoria; Martin O'Connor, Victoria; Al McFadden, Victoria; Preston Austin, Victoria; Joseph O'Connor, Victoria; Mary Hallinan, Victoria; W. W. Jones, Corpus Christi; John G. Kenedy, Corpus Christi; Robert Driscoll, Driscoll; T. A. Coleman, San Antonio; John O'Brien, Refugio; C. B. Lucas, Berclair; John M. Moore, Richmond; James H. Parramore, Abilene; Claibe Merchant, Abilene; and Geo. Ward, Sol West, J. D. Houston, John R. Blocker, and John M. Bennett, all of San Antonio. Such examples of hospitality were not limited to the cattlemen, particularly of early days. They simply represented the attitude of mind of the pioneer people of the frontier. In thickly settled communities one can now safely offer pay for a night's lodging, but among the old Texas families, and especially in the thinly populated districts of the West, a man's house and all he has is yours almost as completely as in the exaggerated courtesy of Oriental peoples.

Before the days of railroads and automobiles social intercourse among the people of the country was more common than it is to-day. Community road working was ordinarily more like a picnic or a pleasant horseback ride of ten miles or so than a day of labor. The roads may not have been greatly improved, but community gossip was interchanged with thoroughness. A good friend would visit another good friend, taking with him in his covered wagon his entire family, including the dogs, and driving ten miles away to his home to stay from Saturday night until late Sunday afternoon. The habit of "staying all night" also was very common among the boys and young men; and the girls went visiting, too, on horseback, instead of the present week-

end visiting or prolonged house-party engagements. Protracted sickness in early days likewise helped to unify community life in neighborhoods. Being without trained nurses, neighbors visited whenever there was sickness among their friends and "sat up" all night in relays with the sick person. Funerals were also largely attended by the entire countryside, and a man's popularity and influence was indicated by the length of the line of wagons and buggies and people on horseback that followed him to his last resting-place. Country folks were fond of exclaiming, "He had the longest funeral ever known in this community." Again, hunting parties, on occasions extending over a month's time, also brought the men of the same and different communities together in groups for intimate talk and association, and were really of positive help in unifying sentiment by an exchange of views on all sorts of questions and in creating mutual esteem and respect for each other. The campfire in early Texas was an influential forum of public opinion as was also the public road workings and country stores.

The spring of the year brought numerous picnics, where on rare occasions was to be found a brass band to furnish music. Some picnics were called barbecues, taking the name from the beeves, hogs, mutton, and now and then wild game, that were roasted whole over an open fire to feed the multitude. In portions of the country where fish were plentiful, "fish fries" were common. The men seined the rivers and caught and cleaned the fish, while the women gathered on some romantic spot on the river bank and fried them as they were brought in. Another favorite

form of country gathering a quarter of a century ago was the tournament, called in the vernacular "toonament." At a tournament skilful riders, flashily dressed, each provided with a long lance, had trials of skill to see which could catch on his lance in three trials, while his pony ran at full speed, the largest number of small steel rings, one and one-half inches in diameter, from five poles. The victorious rider usually caught all the rings. When the tournament first started, the reward of the victor was simply a wreath of flowers with which he crowned his favorite lady. Later the prizes for the contest were highly ornate bridles and saddles, and finally sums of money. The mercenary spirit killed the interest in these contests, and the cowboys, usually the leaders in such entertainments, turned their attention to roping and hog-tying steers against time, which exciting sport in turn drew great crowds of spectators. These exhibitions of skill became so cruel that they were finally prohibited by law. Another form of public entertainment that drew people together in the country was a political meeting, at which great dinners were served, with pony races, foot races, wrestling, and other similar attractions for the less thoughtful. All of these save political gatherings seem now to have given way to athletic exhibitions, baseball, and football. A cowman's camp-meeting still survives in the Alpine country, attended by thousands, some of whom come hundreds of miles. A few whites and very commonly the negroes still conduct outdoor meetings similar to the camp-meetings held a few decades ago.

With the influx of people regular organizations of many kinds have taken up their interest. The Farmers' Union

and the Farmers' Institutes have succeeded the Grange and the Farmers' Alliance. The Masons, the Odd Fellows, the Knights of Pythias, the Praetorians, the Woodmen of the World, and other secret organizations draw their membership from the country as well as the towns. Through the agency of the United States Government, the Agricultural and Mechanical College, and the State Department of Agriculture, there have been formed baby beef clubs, boys' corn clubs, girls' canning clubs, Boy Scouts, and other organizations for the young people, while a multitude of uplift, reform, and educational associations are at work to help country people of all classes; in fact, the common complaint is that the people of Texas are suffering from over-organization. For example, there are in Texas thirty-nine agricultural and live-stock associations, fifty-nine commercial and industrial associations, thirty fraternal organizations, six medical associations, twelve patriotic associations, thirty-two religious organizations, and, besides, fifty-four miscellaneous associations, all attempting to cover the entire state.

One aspect of this organization activity will perhaps be of great benefit to country life; for in Texas, as elsewhere, the people are drifting in ever-increasing numbers from the country to the town; attention has been called as never before to the schoolhouse as the centre of community life, the rallying ground for the people. People with children will naturally think more of giving them an education and of providing them with adequate and comfortable, as well as æsthetic, surroundings while they are in school. The University, the Agricultural and Mechanical College, the

State Department of Agriculture, and the Women's Federal Clubs are all deeply interested in movements to bring the people together at the schoolhouses. The University Athletic and Debating League awakens the ambition of boys and girls for athletic and debating superiority. The old-fashioned spelling bee, popular in the frontier days, has been revived, and its interest for the public is still found to be keen. The little "red schoolhouse" (it is seldom red in Texas, but usually stands on a hill, if a hill is available) continues to be a powerful centre of force, and its influence ought to become stronger and stronger year by year.

At the same time the automobile brings the well-to-do country man into closer contact with the city. He can come in from his ranch or his farm thirty miles distant, do his shopping, and return home before sundown. In the same way he can visit his district fair, or even the great State Fair at Dallas, or the Cotton Palace at Waco, or the Turkey Trot at Cuero, or the Frontier Day at San Angelo, with possibly only a day or two's absence from home. If all the active forces at work to keep Texas primarily a rural state are even only partially successful, its cities and towns will continue to grow slowly. When the Census figures of 1910 were issued by the National Government, it was found that only five cities in Texas contained as many as 100,000 people. The same Census disclosed the fact that there were more than 200 towns in Texas with a population of upward of 1,000 people. There are possibly from 500 to 1,000 villages containing a population of less than 1,000. The influence of these numerous towns on country life has possibly been too great. Picnics, camp-meetings, country barbecues,

political open-air speakings, are no longer so popular; but there are indications that the love for the open air and out of doors has caused the pendulum to swing the other way. The majority of houses built to-day contain sleeping porches. Folks still go hunting and fishing. Automobile trips to Colorado and California are common. During the summer months the coast and river banks are dotted with campers living in tents, many of them sleeping with no cover except the sky. The interurban railroads are calling the people of the cities to build their houses farther and farther in the country. Texas is yet 66 per cent. rural, and possibly it will remain so.

Naturally the influx of people has resulted in a more highly organized society. The real distance between a present-day share-cropper and a banker is far greater than it was between a cowboy and a cattle baron, for social caste practically was non-existent in pioneer days. Then a man's ability to ride without touching leather and to shoot when necessary were apt to give him standing in a community. Texas now has a large renter class, part of them descendants possibly of the "po' white trash"; many others are negroes, whose needs and status are becoming of growing concern to earnest-minded men. Without pressing slum problems, Texas has, notwithstanding, the age-old problem of the poor.

CHAPTER V

THE CITIES AND TOWNS

"The greatness of Texas lies not so much in its vast extent of territory and its abundance of natural resources as in the character of its people which is a composite—with the good predominant—of qualities peculiar to many lands, whence the citizenship of the state has been recruited."—*Professor George P. Garrison.*

THE eight large cities of Texas may be characterized in a word or phrase, so distinctive are the industries and activities which support them. Austin is the educational centre of the state and the home of the state government; Dallas is the wholesale and manufacturing centre; El Paso, the gateway to all of northern Mexico, and the metropolis of west Texas and New Mexico; in Fort Worth is centred the packing industry; Galveston is the second seaport in America; Houston is the railroad centre of southern Texas, where water competition in freight rates is first encountered; San Antonio is the greatest health resort in Texas and the distributing and manufacturing centre of southwest Texas; Waco is a railroad centre of importance near the geographical centre of the state, recently acquiring the added dignity of being the head of Brazos River navigation.

Within the last ten years there has been a notable awakening among the important cities in the matter of civic improvement. And even in the smaller cities marvels of beautification have been effected. Beaumont, the city of

oil, the largest of the smaller cities, has seven parks comprising about 220 acres, the bare land value of which approaches \$150,000, taking no account of nine school cites retained by the city worth in the aggregate about \$75,000. Corpus Christi is a city of about 10,000, whose natural site on a desolate sand beach has been transfigured by paved streets and the immense ornamental retaining walls of concrete along the disreputable "bluff," which overlooks the business portion of the city. Paris, a thriving north Texas city of 12,000, has spent \$175,000 on street paving in the last five years and now boasts about 17 miles of paved streets and a municipal abattoir. The budget of this little city for 1916 carries more than \$150,000. The larger cities have accomplished even more featurable results in the way of civic improvements in the last few years. San Antonio, for instance, has 480 acres in public parks; Fort Worth, 425 acres; Dallas, 418; Houston, 580; Austin, 180; El Paso, 118, and Waco, 179. Many of them are equipped with playground apparatus, band-stands, seats, drinking fountains, zoölogical gardens, and their natural beauty is enhanced by artificial lakes, terraced river banks, and so on.

There are four cities in the state with an "atmosphere," a thing as distinct and as easily identified as temperament is in a human being. Galveston is tropical. Its profusely oleandered avenues, wide boulevards upon which palm trees flourish, the spacious, lazy comfort of its residential areas, and its busy miles of wharves, where strange craft from the world's ends swarm like bees around a hive, all give this port a distinctive air. Galveston's greatest achievement is its sea wall, the test of which came in 1915 during a

storm as terrific as that of 1900 which took its toll of ten thousand lives. With that faith which removes mountains and stays even the might of the furious sea, the people of Galveston slumbered safely through the second great storm in the fall of 1915, which put the sea wall to its conclusive test. It stood; the city was saved, there was great rejoicing, and the hovering fear that had cast a sort of gloom over the city for fifteen years was banished forever.

San Antonio sums up more history than any other city in the state. Its old Spanish missions standing solemn and steadfast amid the hurrying business of a modern city are to the historians what fossils are to the geologist—an ineffaceable and perfectly legible record in enduring stone. All Texas loves San Antonio for her heroic past, while to the tourist her narrow winding streets, polyglot street signs (Spanish-German-English), curious, angular little plazas, and the soft accents of the Spanish tongue, all suggest something new and strange, giving the traveller a hint of what he is to expect if he continues a southern course and crosses the Rio Grande into the land of the Montezumas. Among the things of especial interest to the tourist that distinguished this quaint old city about to celebrate her 200th anniversary are the Chapel of Miracles, where many miraculous cures have been effected, so you are told; the Pastores, yearly acted, the oldest play in America; Coppini's studio, and that also of the painter, Julian Onderdonk, and the Alamo together with several other interesting and historic missions.

As San Antonio is surely the quaintest, so is Dallas the most "citified," city in Texas. It has the "step lively" atmosphere. Its favorite advertisement is a photographic

reproduction of the horizon-line where skyscrapers loom, and new ones are being put up so rapidly that you can scarcely keep count. Dallas is the city that does things. A new railroad terminal building costing \$1,500,000 is just completed, and all the railroad tracks are being taken up and relaid so as to loop gracefully around the city instead of cutting through helter-skelter, country-town fashion. Dallas is all hustle and business. The greatest publishing centre of the South save Nashville, she is the wholesale distributing centre for most of Texas and a large part of Oklahoma.

About four hundred miles almost due west of Dallas you find the fourth city in Texas with an "atmosphere." El Paso is *in* but not *of* Texas. Hundreds of miles from the nearest populous Texas community, you hear ten El Pasoans speak of having taken a trip to Los Angeles to one who mentions visiting San Antonio. El Paso's eyes are turned to the west. She is interested up the Rio Grande, not down it. She is really the metropolis of New Mexico, although Albuquerque is nominally so. Her main interest in Texas is in connection with the cattle industry of sparsely populated western plains and mountains. There is nothing else that so rejoices the heart of this city as a cattlemen's convention, bringing, as it does, to her streets sun-tanned throngs of upstanding cowmen gathered in from that wide, wild territory lying between Devil's River on the east and the Gila on the west. Of course, El Paso has been in an abnormal condition for the past five years, due to the revolutions in Mexico. Financial filibustering has found headquarters in this city, and illicit traffic in war munitions has doubtless

been carried on. Men from all over the world having interests in Mexico have found it convenient to establish headquarters in El Paso, and hence, El Paso has become the most cosmopolitan city in Texas. It is western in the same sense that Los Angeles is; it is as non-Texan as Albuquerque; it is more Mexican than any other city along the border with the possible exception of Brownsville.

The government of Texas cities has also been a matter of great interest not only at home but abroad. The commission form of city government had its origin in Galveston just after the great storm of 1900. Here was a city absolutely wrecked and apparently ruined. No one knows how many lives had been lost, but conservative estimates place it at 10,000. The principal streets were piled high with debris, the water-works, electric lighting system, and street railways were all smashed to bits. The great causeway two miles long was torn to pieces, thus cutting off communication, except by boat, with the mainland. The stench of decaying bodies of beasts and human beings was sickening. It seemed a superhuman task to bring any sort of order out of this chaos wrought by wind and waves. The old city government perished in a night. A commission of the ablest business men of the city assumed control by common consent.

The commission form of government for cities was born of this terrible catastrophe, and in a very few years by its marvellous efficiency it had won a secure place. The following cities in Texas have now the commission form of government: Abilene, Alice, Amarillo, Anson, Aransas Pass, Arlington, Austin, Beeville, Brownsville, Calvert, Canadian,

Coleman, Commerce, Corpus Christi, Dallas, Denison, Denton, Devine, Eagle Pass, El Paso, Ennis, Fort Worth, Galveston, Goldthwaite, Greenville, Groesbeck, Hereford, Hico, Hillsboro, Honey Grove, Houston, Jacksboro, Kenedy, Luling, McGregor, McKinney, Marble Falls, Marshall, Mart, Mexia, Mineola, Mineral Wells, Nocona, Palestine, Plano, Port Arthur, Port Lavaca, Richmond, San Angelo, San Antonio, Sherman, Sulphur Springs, Sweetwater, Taylor, Terrell, Texarkana, Tyler, Van Alstyne, Waco, West, Yoakum.

The following Texas cities have adopted during the last two years the city-manager plan: Amarillo, Brownsville, Denton, San Angelo, Sherman, Taylor, Terrell, Tyler, Yoakum.

The cities of Texas are equipped with forty-nine free public libraries, thirteen of which have been built and are maintained with the help of the Carnegie library fund, only two of which, however, contain more than fifty thousand volumes. Three others have between thirty and fifty thousand volumes and the remainder less than 30,000. There are in addition thirty-five small subscription libraries ranging in volumes from a few hundred to four thousand.

Of course, a number of the smaller cities use the libraries of colleges that happen to be located in the community. For instance, Austin, a city of over 30,000 inhabitants, has no public library, but the University of Texas library of 109,000 volumes and the State Library of 33,000 volumes are used freely by the people. There are thirty-three college libraries in the state, the great majority of them ranging from two thousand to twelve thousand volumes.

The social centre movement has not as yet made any great headway in Texas. The "community spirit" has no means of manifesting itself as a rule, except through commercial organizations, and they are not thoroughly representative. In the smaller places the social life is centred for the most part in the churches, of which there are some eight or ten denominations represented in every town of more than 5,000 population in the state. Country clubs are becoming more and more popular with the wealthier classes of the urban population. When statistics were last collected there were forty-three of these institutions in the state, most of which provide their members with a golf course of nine or eighteen holes.

With the intention of finding out how many cities in Texas have public parks, and the amount of money invested in the same as well as the area covered, a questionnaire was sent out to the 100 most populous centres in the state asking for this information. Answers were received from seventy cities, the information thus gathered concerning the eight largest cities having been herein previously set forth. Of the sixty-two lesser cities answering this questionnaire, forty have public parks of one kind or another. Relatively small cities, such as Tyler, Wichita Falls, and Marshall have 70, 60, and 40 acres, respectively, devoted to this purpose. The acreage and value in public parks in a number of the smaller cities follow:

Amarillo, 20 acres, value \$30,000; Cameron, 28 acres, value \$5,500; Corsicana, 24 acres, value \$30,000; Laredo, 72 acres, value \$120,000; Marshall, 40 acres, value \$10,000; San Angelo, 80 acres, value \$40,000; Sulphur Springs, 88 acres,

\$15,500; Waxahachie, 30 acres, \$15,000. The aggregate park area of the forty-two smaller cities, the officials of which furnished information on the subject, is 754 acres, the value of which is considerably more than a million dollars.

CHAPTER VI

EDUCATION

"The schoolmaster is abroad in the land and I trust more to him, armed with his primer, than to the statesman with his year book."—*Lord Brougham.*

"Let me teach the children of a nation, and I care not who makes the laws."
—*C. K. Lee.*

APPROPRIATIONS of money shall not be made for a longer period than two years, except for purposes of education," reads a clause retained in the various Texas Constitutions up to the Constitution of 1876—a special exception in favor of education that indicates the overtopping interest felt in this cause by the pioneers of Texas. When Texas rebelled from Mexico the delegates assembled at Gonzales said in one of their counts in their indictment against the government of Mexico: "It has failed to establish any system of public education, although possessed of almost boundless resources (the public domain), and although it is an axiom in political science that unless the people are educated and enlightened it is idle to expect the continuance of civil liberty or the capacity for self-government." They, therefore, resolved "to provide as soon as circumstances will permit a general system of public education." In an address to the Congress of the Republic two years later President Mirabeau B. Lamar delivered a sentence which has become the motto of the University of Texas and is printed on every piece of literature sent out by the

institution: "Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire."

The bigness of Texas and the extent of its rich lands seems to have been inseparably connected in the minds of the fathers of Texas with a great and adequately supported system of public education. In 1838 President Lamar in a message to the Third Congress of the Republic said: "The present is a propitious moment to lay the foundation of a great moral and intellectual edifice which will in after ages be hailed as the chief ornament and blessing of Texas. A suitable appropriation of lands to the purpose of general education can be made at this time without inconvenience to the government or to the people; but defer it till the public domain shall have passed from our hands, and the uneducated youths of Texas will constitute the living monuments of our neglect and remissness. A liberal endowment which will be adequate to the general diffusion of a good rudimental education in every district of the Republic and to the establishment of a university where the highest branches of science may be taught, can now be effected without the expenditure of a single dollar. Postpone it a few years and millions will be necessary to accomplish the great design." President Lamar, like Thomas Jefferson, realized that a system of education without a university to give it inspiration and direction would be a failure. And to him, probably more than to any other man, is due the credit of the public school system of Texas, with the University at its head. The immense tracts of public lands were to provide funds for the perpetuation of the entire system. As a result of his message,

Congress appropriated the following year to each county in Texas three leagues (13,284 acres) of public lands and set aside fifty leagues for the support of a university to be located in the future city of Austin. Later, when Texas became a state, the Legislature granted four leagues of land (17,712 acres) to all counties organized after February 16, 1846.

Furthermore, all subsequent legislation for the support of education depended mainly on liberal land grants. In a few instances, even, lands were donated to private institutions, as in the case of Ruttersville College near La Grange. When it is recalled that the delegates to these early congresses of Texas, who cast their vote for the establishment of a university for the benefit of the youths of the state, yet lived in log houses and came to the sessions of Congress clad in coonskin caps, deerskin coats, leather pantaloons and moccasins, their plans for a university seem little short of wonderful. But their attention was too much occupied with blazing out homes in the wilderness, with Indian fighting and with the troubles in Mexico, to put their recommendations into practical form until much later, when the more settled affairs of statehood enabled them again to make the matter of education a special concern. The legislature of 1858, however, adopted a measure of far-reaching importance. An act was passed granting a bonus of sixteen sections (10,240 acres) to the railroads for each mile of track completed, provided the railroads should survey at the same time sixteen alternate sections which should become a land endowment for the support of the public school system of Texas, each tenth section to be the property of the unborn University of Texas. This grant was in addition to the lands hitherto ap-

portioned to the common schools and to the University. By 1876, when this law was changed, under its operation there had been set apart nearly thirty million acres of land for the public schools and three million two hundred thousand as an endowment for the University. These lands were located in the best agricultural regions of the state and were worth, even in 1876, a large sum of money. Had the state held the settlers, who took the lands up and finally bought them, to rigid accounting, the school system of Texas would have had a princely endowment; though subsequent action, as we shall see, did not entirely impoverish the system. The Constitution of 1876 annulled the Act through which the University had become possessed of three million two hundred thousand acres of the richest Texas lands and, instead, granted to the paper institution one million acres, to be surveyed in the western and more unfertile districts of the state. Later an additional million acres were added. The institution has for an endowment at present considerably more than two million acres of land, in addition to \$600,000 of bonds accruing from gifts and the sale of lands. What the University's lands may ultimately be worth (it has been the policy of the Regents of the University to hold them for a rise in land values) when irrigation becomes possible or when minerals are discovered on them, is yet a matter of conjecture. At present they are mainly leased to cattlemen and yield an annual rental revenue amounting in round numbers to \$160,000.

State support of public schools has been continuously liberal. In addition to granting, for the immediate support of schools, all the proceeds of a dollar poll tax and one-fourth

of all taxes collected to their support, the Constitution of 1869 gave one-fourth of all the public domain as the perpetual public school fund. Later one-half of the public domain was granted for this purpose, and still later the entire body of public lands that remained in Texas were set aside for the benefit of the public schools. The present Constitution, adopted in 1876, provides that local taxation for school purposes should not exceed 20 cents on the dollar. This provision was amended in 1911, increasing the amount that can be levied in any local district for school purposes to 50 cents on the dollar. The law has also recently been amended so as to extend the free school age from seven to twenty-one years.

Long before any Americans lived in Texas the Catholic Church established the first schools in the state. These schools were located in the chain of missions founded by the Spaniards for the joint purpose of educating and converting the Indians, and for holding the land against rival claimants. While these efforts, so far as history reveals, proved entire failures, they illustrate the activity of the Catholic Church in educational matters. This activity was again manifest when Stephen F. Austin brought his first colonists to the state, then under Mexican rule. In each town established a block of ground was set aside for public school buildings, whose course of study should include the "teaching of the catechism." There were really no public schools in Texas until 1854. Schools fostered by denominations other than the Catholics were surprisingly numerous, in addition to many private schools. Among the church schools that have survived from these early days is Baylor University, estab-

lished at Independence, Texas, and now located at Waco. The charters of the three early Methodist colleges, McKenzie College at Clarksville, Wesleyan College at San Augustine, and Rutgersville College in Fayette County, were later absorbed by Southwestern University, now a flourishing institution at Georgetown, Texas. The Southern Methodist University at Dallas, opened for its first session in the fall of 1915, promises to be an educational venture of importance. Other well-supported Methodist institutions are Kidd-Key College at Sherman, Texas Woman's College at Fort Worth, San Antonio Female College, San Antonio, all for women only, and numerous other smaller enterprises. The Baptist Church maintains a chain of colleges, principally as feeders for Baylor University, the oldest Texas institution of higher learning and said to be the first university in the United States to admit women on equal terms with men. The Presbyterian Church supports Austin College at Sherman, Trinity University at Waxahachie, and several other colleges of reputation. Texas Christian University at Fort Worth, maintained by the Christian Church, and Baylor Female College at Belton, a Baptist institution for young women, are two other institutions that have had honorable careers. The most noteworthy privately endowed educational institution in Texas is Rice Institute, located at Houston, which is now opening its fourth session. It has an endowment amounting to more than ten millions of dollars and should do much to fix educational standards and to advance the educational ideals in the Southwest.

The Texas Almanac, published annually by the Dallas *News*, lists forty-five "colleges" in Texas, some of which are

poor, some indifferent, some good. Seventeen have standard entrance requirements; many of the others have neither the money nor the faculty necessary to maintain a four years' college course. The Catholic Church and the Episcopal Church have various educational enterprises, the Catholics conducting a college in nearly every larger city of the state. Mr. Bryce, in his "American Commonwealth," tells about a president of a university in the West who gave a list of his faculty as consisting of himself, his wife, one son, and two daughters. This remarkable university might very well have been located in Texas, where in one county—a county of rather small population—operated at the same time nine so-called colleges, only one of which exists to-day—and that one has taken a more modest name. Rice Institute, elsewhere alluded to, with its large endowment, has possibilities of great good. Its presence in the state, with its administration unhampered either by the church or by politics, will exercise a wholesome influence on all higher education, and the freedom it enjoys will doubtless ultimately be granted in large measure to other competing educational institutions. As time goes on additional endowment will come to Rice Institute, as well as to many college enterprises fostered by the churches.

According to statistics for 1912 more students in Texas attend church-supported colleges than are registered in state-supported colleges, the numbers being 14,887 and 8,370, respectively. It is not likely that this condition will long continue. As the demand for technical education becomes more imperative, the state will doubtless multiply its institutions designed to fit boys and girls as experts in agriculture, engi-

neering, domestic science, and what not. The expense involved in such schools will probably deter the churches from entering the field of vocational education and they will leave this work to the state, just as they have left the larger portion of high school and graded school training.

The development of church education in Texas has, then, been entirely normal. Every church with any considerable membership invites students of college age to attend some educational institution—and some are excellent—ranking beyond the best high schools. As elsewhere, the churches do not enter into competition with the state except in college work. It ought to be said for them, however, that church colleges were in active operation long before the state, other than in ornately phrased resolutions, had begun any college enterprises. McKenzie College, at Clarksville, drew hundreds of robust boys to be swayed by a forceful president who flogged grown men when he thought fit, and who prayed at chapel with his eyes open and punctuated his prayers by reproofs and even by castigation, to be sure that no guilty person escaped detection. McKenzie College and other church institutions furnished for the past generation educated ministers, physicians, lawyers, teachers, business men, and the work was well done despite discouragingly meagre equipment, inadequate buildings, and poorly paid teachers. Even until to-day, when the church colleges are better financed, their faculties devote themselves to teaching boys and girls largely for reasons of loyalty and devotion to duty. Their lives are as noble examples of self-sacrifice as this age affords. That many church colleges have died does not mean that they have been failures. They were like a

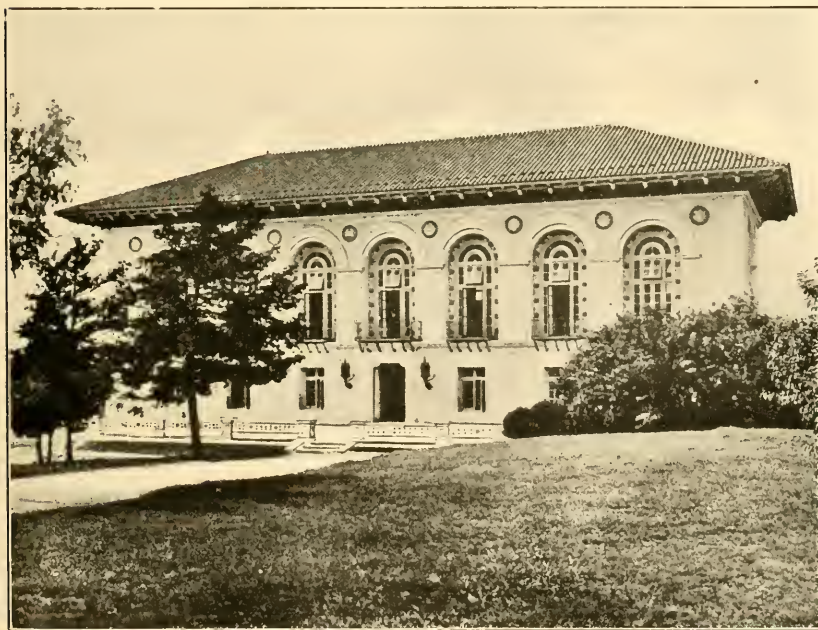
pure spring, that, so long as the water bubbled out, brought life and fertility to the waste places.

For the purposes of this volume it is the public free school system that deserves special comment. Tuition in any school of the system, from the primary grades to the University, is free to the world. (In the grades students must register according to law and be of a certain age.) In the University of Texas, after a matriculation fee of thirty dollars has been paid, no further tuition charge is exacted. The other seven institutions of higher learning are supported entirely by the state. Among these is the college for negroes, the Prairie View Normal and Industrial Institute. While the University, the Agricultural and Mechanical College, the four State Normals for whites, the College of Industrial Arts, and the Prairie View Normal, are really a part of the system of public schools, this term is ordinarily applied only to the graded schools. These schools, from the high school down to the lowest primary grade, are under the supervision of the State Superintendent of Public Instruction, a state officer of the same rank and salary (\$2,500) as the State Treasurer, State Land Commissioner, State Comptroller, etc., and, as are all these officers, elected by popular vote for a term of two years. In addition to the State Superintendent's office force, other supervising officials, known as county superintendents, are elected in each county containing 3,000 or more children of scholastic age. In other counties the county judge performs the superintendent's functions.

Although the duties of these officials are mainly those of interpreting the school laws or of acting in advisory and re-



MAIN BUILDING AND CADET CORPS OF AGRICULTURAL AND MECHANICAL
COLLEGE, COLLEGE STATION, TEXAS



UNIVERSITY OF TEXAS LIBRARY



CARNEGIE LIBRARY, FORT WORTH, TEXAS



ROSENBERG LIBRARY, GALVESTON, TEXAS

viewing capacities, their work and influence is of first importance. The State Superintendent is the recognized authority on all matters of public education. Measures of legislative educational reform usually originate in his office, and he it is who is most influential in transforming popular educational reforms into statutes.

Writers fond of dealing with round numbers commonly speak of Texas having a school fund valued at one hundred million dollars. The exact figures as shown in the report of the Superintendent of Public Instruction at the close of business August 31, 1914, are as follows:

Permanent school fund:

Bonds.....	\$18,204,363
Land notes.....	47,067,427
Unsold lands, 1,847,445 acres at \$1.50 per acre	2,771,173
Cash.....	<u>35,028</u>
Total.....	\$68,077,991

Permanent school fund belonging to different counties:

Bonds.....	\$ 4,628,087
Notes	5,379,899
Other securities.. ..	81,517
Lands, 334,264 acres, estimated value	2,085,448
Cash.....	<u>449,975</u>
Total.....	\$12,624,926
State school fund	<u>68,077,991</u>
Grand total.....	\$80,702,917

If to this grand total be added a fair valuation of the buildings and grounds and properties set aside for the eight institutions of higher learning supported by the state, the total

sum will not fall very far short of the estimate of one hundred million dollars. The state permanent school fund is held in immediate charge by the State Board of Education, which consists of the Governor, Secretary of State, and Comptroller. The Superintendent of Public Instruction is ex-officio Secretary of this Board. For the fiscal year ending August 31, 1914, the income from the state school fund amounted to \$7,150,000. For the same year there was an additional public school fund income from county, district, and city special public school taxes of approximately \$7,000,000. Thus Texas spent on her one million children of free school age for 1914, \$14,150,000, or an average of \$14 for each child.

The latest available data (1910) setting out the training of Texas teachers in the public schools shows that 7,651 (813 are negroes) are graduates of standard high schools, normal schools, or colleges. The 1,452 graduates of colleges are principally engaged in high school teaching. All except a few of the public school teachers are required to pass examinations for certificates to teach. These certificates are of four grades, permanent, first, second, and third grade. A first-grade certificate holder receives adequate preparation in an ordinary high school, provided he supplements it with certain pedagogical subjects. At the present time, of the 20,853 certificate holders in Texas, 532 have third grade, 10,801 second grade, 5,837 first grade, and 3,683 permanent certificates. The lowest grade certificate is not to be further issued.

As the State Board of Education consists of only three members, one of whom is appointed by the Governor, with

the Governor as its head, the Board can be controlled by one person. It often happens, therefore, that politics plays some part in the administration of this fund, though it should be said that no taint of dishonesty or graft has even been successfully charged. A Governor will sometimes, however, as did Governor Colquitt, declare a greater pro rata than is justified by the amount of funds in hand, in order, perhaps, that his administration may win favor with the people. The state per capita apportionment is for 1915-1916 six dollars for each child, although the amount would certainly be larger had not the Governor insisted on an apportionment of eight dollars for each child for the previous year. Since the State Superintendent of Public Instruction is commonly the most thoroughly posted man on questions of public education, his advice usually has influential weight, particularly in those matters wherein politics do not enter.

The negro has for more than a generation been a scapegoat for backwardness in educational statistics; but no longer can this old excuse do service in face of the facts. The records show Texas contains 275,346 negro children within the scholastic age, 7 to 21 years. Last year 162,000 of these negro children enrolled in the public schools of the state, and their attendance record was 57 per cent., compared with 66 per cent. for the white children of the state. The United States census report for 1910 shows that negro illiteracy in Texas decreased during the decade 1900-1910 by 42,520 persons, while the same report shows that illiteracy among the whites increased by 11,299. What influence immigration had on these figures does not appear.

It is a common belief that the negro population in Texas,

as in other Southern states, is shamefully discriminated against in the distribution of the public school funds and in other relations with the State Department of Education. The facts are these: when a negro comes up for examination, either before the county or state examining board, he is required to answer precisely the same questions as are given to white teachers. When his paper is read, however, it is more liberally graded. This may seem an injustice to the negro, but it is not meant to be so; for, were not this practice followed, many a negro school would be without a teacher. When the state school funds are apportioned to a county, each county gets its exact pro rata according to the total number of white and negro children. Furthermore, when these same funds are apportioned by the counties, each district in the county gets its share in proportion to the scholastic population, white and colored. Whatever discrimination is practised in the distribution of the fund is done within the district as units. "Suppose," said the writer to a gentleman who had served as superintendent of one of the populous counties of Texas, "you had a district in your county containing two schools, one for the whites and one for the negroes, each having an equal number of students of free school age. How would you apportion the money between these two schools?" "If I gave the white teacher \$60 a month," he answered, "I should allow the negro teacher \$40 a month, and at the same time would divide the funds so that the white school could run longer." "But would not this be against the law and unjust to the negroes?" I urged. "No," he answered, "for the law provides that schools in the same district must run equally long as far as

practicable, thus allowing some option to the trustees and the county superintendent of schools. As to the matter of injustice, negro children who live in the country, as a rule, more often have to work in the field than white children, and it would therefore be impossible for them to be in school as long as the whites. Furthermore, negroes pay only a very small per cent. of the taxes, their teachers are not so competent as the whites, and they certainly have no righteous claim to an equal division."

It should be added that in communities levying local taxes it is customary to divide the income in proportion to the taxes paid by the white and negro citizens. In all the larger cities and towns, however, negro public schools uniformly run as long as the white schools, although negro teachers do not draw salaries equal to those of the white teachers. Under the law requiring all school trustees to be able to read, write, and interpret constitutional educational provisions, negro school trustees are practically unknown in Texas. The law was framed frankly to exclude them, and the test put upon negro applicants for trustees would probably puzzle a member of the Supreme Court of the United States. Wherever negro school trustees are found, they are simply permitted to serve through the personal favor of their white brethren.

Under a state law graduates of twelve colleges in Texas who have taught for three years are issued life certificates as teachers. Two of the colleges recognized under this law, Bishop College and Wiley University, both located at Marshall, Texas, are institutions for negroes only. Wiley University, under the presidency of Dr. Dogan, a graduate

of Columbia University of New York City, is regarded by the State Department of Education as the most efficient negro institution of higher learning in the state.

As might have been expected, the national movement to consolidate small country schools has been slow in Texas, with its magnificent distances. Despite continuous agitation for the past ten years not more than two hundred schools have yet been consolidated. The sparse population in some sections of the state and the impassable roads in the black land districts, where the population is congested, are two of the obstacles found difficult to overcome. In Texas, as elsewhere, local pride and prejudice likewise play their part in hindering the progress of this movement.

The present Governor of Texas, Mr. James E. Ferguson, during his first administration has most likely won a strong claim to the title of Texas' greatest educational Governor. He was the first Governor, at least in recent years, who approved, without vetoing an item, all the educational appropriations made by a generous legislature, amounting to a total for two years of \$5,500,000. Included in this sum was \$1,000,000, to be apportioned in sums not to exceed \$500 to schools in the state with less than 200 students in attendance. Some of the other limitations of this fund tend to improve the entire school system. For example, the attendance record for the past year of any school receiving benefit from the fund must have been at least 50 per cent.; the district must carry a local school tax amounting to 50 cents—the constitutional limit; the school building must be constructed according to modern principles of heating, ventilation, and sanitation; teachers with professional

training or experience must be employed; and a library and apparatus must be provided sufficient to carry on a course of study outlined by the state.

According to the latest scholastic census there are 1,113,800 persons of free school age in Texas, 215,146 of whom are negroes. The average school term in days for 1912 was 132. The same statistics show that there were 12,628 school buildings, which, including equipment and grounds, and excluding the higher institutions, were valued at \$31,000,000. The value of negro school property was \$1,500,000. The total bonded indebtedness of the free school system amounts to \$20,000,000. These bonds are largely held as an investment by the state permanent school fund.

The great growth in public school sentiment in Texas has come during the past twenty years. Upon request the present State Superintendent of Public Instruction, Mr. W. F. Doughty, has pointed out some of the important steps in this progress:

Twenty years ago there was hardly any school supervision in the state worthy of the name. In 1893, during the administration of Mr. J. M. Carlisle, State Superintendent of Public Instruction, the Twenty-third Legislature passed a law permitting the commissioners' courts to create the office of county superintendent. In 1905, during the administration of Mr. R. B. Cousins, State Superintendent of Public Instruction, the law governing the creation of the office of county superintendent was amended to make the office mandatory in all counties having a population of 3,000 or more children of scholastic age and permitting the establishment of the office in counties having less than 3,000 children of scholastic age by process of law. Under the operation of this law we now have 125 county superintendents, who in most instances possess very satisfactory qualifications for their work. There is a strong and growing sentiment among the friends of education in the state favoring a law making the office of county superintendent mandatory in all counties of the state and placing

his selection and the fixing of his salary in the hands of the county board of education.

The growth of public high schools in this state during the past twenty years has been little short of marvellous. Twenty years ago the public high schools were few in number, and those in existence at that time were poorly organized. At the present time one is justified in expecting to find a modern high school, well adapted to the needs of the people supporting it, in every city, town, and village in the state; and it is not uncommon now to find good rural high schools in country districts. In all probability the University of Texas has been the most potent influence in the development of public high schools in Texas. At any rate, the University took the initiative in encouraging the work and set the standards for the public high schools.

Within recent years the State Department of Education has been active in promoting and establishing public high schools. There are now in successful operation in Texas approximately 1,000 public high schools subject to classification by the State Department of Education. In 1911, during the administration of Mr. F. M. Bralley, State Superintendent of Public Instruction, the Thirty-second Legislature enacted a law which created the county board of education empowered with authority to establish where practicable rural high schools. As a result wonderful progress has been made in building up good rural high schools in country districts.

The Thirty-third Legislature passed a schoolhouse building law which regulates the construction of all schoolhouses in the state costing more than \$400. The law came into operation at a time when schoolhouses were being built at an unprecedented rate, and on that account has wielded a most wholesome influence. In addition to this should be mentioned the clause of the million-dollar appropriation for rural schools, which requires that any district receiving an appropriation from this fund shall offer a schoolhouse building meeting substantially the requirements of the schoolhouse building law. As a result hundreds of old schoolhouses constructed before the schoolhouse building law was enacted are now being remodelled and made to meet the provisions of the law.

Rapid development has been made in the training of teachers for public school work. Sam Houston Normal Institute,* the first normal

*Established in 1879 mainly because of an agreement of the agent of the Peabody Fund to contribute \$6,000 annually to its support. This support has now been withdrawn and all the normal schools are entirely under the care of the state.

school of the state, was established at Huntsville in 1879; the North Texas State Normal College was established at Denton in 1899; the Southwest Texas State Normal School was established at San Marcos in 1901; and the West Texas State Normal College was established at Canyon in 1909. The Thirty-fourth Legislature provided for the establishment of three additional normal schools, which schools cannot at present be located on account of a technicality of the law pertaining to the appointment of a locating committee. In addition, a School of Education is maintained in the University of Texas and departments for the training of teachers have been established in the Agricultural and Mechanical College, the College of Industrial Arts, and various church schools of the state.

Prior to 1911 very few state certificates were issued and county certificates were in general use. In 1911, during the administration of Superintendent Bralley, the Thirty-third Legislature passed a law making practically all certificates state certificates, and now all teachers' examinations are held under the direction of the State Department of Education, and the papers are graded by the State Board of Examiners.

In 1903 the Twenty-eighth Legislature made an appropriation for the purpose of establishing departments of manual training in one high school at least in each congressional district of the state. Succeeding legislatures have added funds for this purpose and, in addition, have made liberal appropriations for the purpose of establishing departments in the public schools for teaching agriculture and domestic economy. As a result, interest in teaching vocational branches has been quickened and the people of this state have been made to appreciate more than ever before the value of these fundamental branches.

The Thirty-second Legislature submitted an amendment to the Constitution providing for a six-year term of office for persons appointed as members of the boards of control of educational and eleemosynary institutions of the state. This amendment was adopted by the people and accordingly the Thirty-third Legislature enacted a law carrying into effect the purpose of the amendment, which was to prevent the subjection of these institutions to political changes or changes in the executive, leaving boards free to select men best suited to administer the affairs of the state's institutions of higher learning and to instruct the youth of the state without regard to political influence or political changes.

The following very recent achievements are worthy of mention: The rural school law providing for a county board of education and author-

izing the county superintendent and the county board to grade and classify the rural schools.

The fact that the State Department of Education now has authority to inspect high school work with the view of giving each school a rating has caused trustees to provide better buildings and equipment, to employ professionally trained teachers, and to enrich their courses of study so that the schools of the state are brought in closer touch with the needs of the people in general.

The enactment of a practicable compulsory school attendance law for the people of Texas by the Thirty-fourth Legislature marked a great victory for the cause of popular education in this state.

The greatest single piece of school legislation within recent years was enacted into law in 1915, when the Thirty-fourth Legislature passed a bill providing an appropriation of \$1,000,000 for the present biennium for the purpose of aiding the people of the weaker rural school districts of the state in their efforts to establish for their children adequate school facilities.

The forty-acre campus of the University of Texas, with an amazing lack of foresight for the needs of a modern university plant, was selected by Stephen F. Austin himself and surveyed under his direction. The people afterward by a popular vote decided that only the main department, including the academic, law, and engineering schools, should have its home on Austin's site. Opened in 1883, the institution has grown steadily in numbers and influence. More than 4,000 students, either in residence or by correspondence, are each year on its class rolls. From its law department come two members of President Wilson's Cabinet; its engineers are helping to make green the waste places throughout the world; its medical department is rated A plus by the American Medical Association.

The medical department of the University of Texas, opened in 1891, is located at Galveston; the School of Mines

is at El Paso; and the Agricultural and Mechanical College, while technically also a branch of the University, flourishes at College Station, more than one hundred miles away from Austin. Following the grant made by the Congress of the United States for the support of institutions of this character, the Agricultural and Mechanical College was organized and located in 1876, seven years prior to the beginning of the University of Texas. Since its organization it has been maintained as a separate and distinct school with its own governing board who apply independently for support at the hands of the legislature. While its manifest opportunity for service has been to aid the overwhelmingly large agricultural classes in Texas, its best contribution thus far has been in turning out unusually well-equipped engineering students whose training compares quite favorably with that given by the Engineering Department maintained at the University. Recently under the stimulus of the Texas Farmers' Congress, the Texas Industrial Congress, and the increased revenues at hand and in prospect from grants of the National Congress under the Smith-Lever Bill, the work in Agriculture and allied subjects in the College has been much more thorough and has attracted a large number of students. As a part of the University, the A. & M. College is entitled to its portion of the lands originally set apart for the University of Texas. While speaking on this subject in the State Senate, Mr. A. W. Terrell said in 1882: "Had that law (Act of 1858) not been disturbed by the Constitution in 1876, the University would now own three million two hundred thousand acres of land instead of having to apply to the legislature for a donation, the effect of which would be but

so much restitution of its original endowment." This restitution has, however, been going on continuously, as the legislature for a number of years has been making, on the whole, generous appropriations biennially for its support. The appropriations for two years for the University, excluding the Agricultural and Mechanical College, as approved by Governor James E. Ferguson, are for 1915-1916, \$734,000; for 1916-1917, \$730,000. If to these amounts be added \$160,000 a year from the landed endowment and \$40,000 a year from other sources (tuition is free to every one), it will be seen that the income for the present biennium of the University is more than \$900,000. Separate and equally liberal appropriations have been made for the Agricultural and Mechanical College, for the Girls' Industrial College at Denton, for the four State Normal schools, the Prairie View Normal Industrial College (for negroes), for the State School for the Blind, the Deaf, and Dumb (both the whites and negroes), and for the State Orphans' Home. The total appropriations for these institutions made by the Thirty-fourth Legislature for two years amount to more than \$5,000,000.

Texas people are interested in public education and wish the best advantages for their children. When the University of Texas was organized in 1883, all of its professors were put on a salary of \$4,000 each, at that time about as much as any university paid to its instructors. Two of the men elected to chairs were W. T. Harris, formerly Commissioner of Education of the United States, and Judge T. M. Cooley of the University of Michigan. One of the first men elected to the presidency of the Agricultural and Mechanical College

of Texas was Jefferson Davis. None of these men accepted the position to which he was elected, but the ambitions of the Texans in educational matters were thus reflected. Everywhere there are signs of progress. Most communities vote the constitutional limit of 50 cents on the \$100 for school taxes, the total amount collected at this time from this source being more than \$6,000,000 annually, and the increase from this single source is growing at a rate of approximately a million dollars a year. Two new schoolhouses are built each day. The schoolmaster is abroad in the land.

CHAPTER VII

THE CHURCHES

"There are no churches in Texas, no ministers of the gospel, no religious associations. Mother, I am afraid the way from Texas to Heaven has never been blazed out."—*William H. Jack in a letter from Texas to his mother in 1836.*

IT WOULD require a large volume to give any adequate notion of the work of the churches in Texas. The story of pioneer times, as well as the period of progress and development, is enwrought with stirring incidents where Protestant preachers of the gospel and priests of the Catholic faith have played a noble part. Side by side with the Spanish and French explorers marched the Franciscan friar with no weapon in his hand save the cross; Austin and his colonists, although compelled to give fealty to the Catholic Church, had scarcely built their first cabins before the Methodist itinerant, clad in sheepskin and blanket, followed closely by Baptist, Presbyterian, and Episcopal missionaries, was among them to exhort them to righteous living. They, as Governor Hubbard once said, "keep abreast with the gold digger, the gambler, and the buffalo, as westward the star of empire moves." The early Protestant preachers, unlike their Catholic brethren, often travelled with rifle on shoulder and bowie knife in belt; while on many occasions a pistol lay beside the Bible as the preacher conducted the service in momentary fear of an Indian foray. Early records of the churches likewise give stirring pictures of affrays with des-

peradoes resentful of the plain speaking of these early men of God, who, robust and fearless, did not hesitate to practise muscular Christianity whenever it seemed needful, and many were the martyrs to the cause of righteousness, particularly in the case of Catholic priests, who were unacquainted with the habits of the Indians and often too trustful of their promises.

According to Catholic chroniclers (who are justly proud of the fact) the first service held in the confines of Texas was conducted in 1685 by five French priests connected with LaSalle's party. Other historical writers seem to think that religious services were held at least one hundred years earlier at El Paso, Texas, where a Spanish settlement existed. At any rate, it is known that Catholic priests were with the Spanish troops who established themselves at El Paso as early as 1585. Between this date and 1718 the Franciscans in connection with Spanish soldiers set up various mission stations throughout Texas. A line of these missions reached from Brownsville to El Paso, if stations some hundred miles apart could be termed a line. Among these was a group of missions on the San Saba River in Menard County; another group was located as far east as Nacogdoches. The purpose of these missions is generally recognized to have been twofold: first, to hold the country against the encroaching French and to extend the limits of New Spain; second, to Christianize the Indians. A mission headquarters, therefore, consisted of a church and homes for the priests in charge, barracks for the Spanish soldiers who were always present, and quarters for the Indians who were being Christianized. "First," wrote one priest, "we have to

transform these savages into men and then labor for their conversion to Christianity." For all practical purposes, therefore, every mission was a fort and around this fort were fields cultivated by the Indian converts who were given instruction in agriculture as well as in the tenets of religion. The first Indian baptism in Texas occurred in 1703. Afterward in a single year Catholic priests, according to their church records, baptized as many as five thousand.

Trouble between Mexico and Spain in the early part of the nineteenth century stopped the progress of mission work, and by 1825 the field was entirely abandoned. The priests were scattered and the Indian converts so completely submerged by the less-civilized tribes that it is difficult to see what permanent good was done by a large expenditure of money and one hundred and fifty years of noble sacrifice on the part of the priests. Of great interest to tourists, some of the mission churches, it is true, still stand as monuments to the brave men who gave their lives to the wilderness. The Chapel of the Alamo in San Antonio is the most famous; the Mission Concepcion, a few miles south of San Antonio, is the best preserved; San José, sixty years in building, is the most beautiful architecturally. The Mission Ysleta, twelve miles from El Paso, is also notable.

Active work was again undertaken by the Catholics under the leadership of Father Odin, Archbishop at New Orleans, who visited Texas in 1840, when only two priests were left in the republic, and both of these with such unsavory reputations that he immediately discharged them from office. Through the work of himself and other priests who came after him, within twenty-one years there were fifty priests



PROMINENT COLLEGE PRESIDENTS

EDGAR ODELL LOVETT

William M. Rice Institute, Houston, Texas

F. M. BRALLEY

Girls' Industrial College, Denton, Texas

W. B. BIZZELL

Agricultural and Mechanical College, College Station, Texas

SAMUEL PALMER BROOKS

Baylor University, Waco, Texas

DR. R. J. HYER

Southern Methodist University, Dallas, Texas



PROMINENT MINISTERS OF TEXAS

Rev. R. E. Vinson, Presbyterian,
Austin

Rev. George W. Truett, Baptist,
Dallas

Rev. W. D. Bradfield, Methodist,
Dallas

Very Rev. James M. Kirwin, Catholic,
Port Lavaca

at work in the state, with almost an equal number of churches and Catholic schools. Another notable Catholic leader of the time was Father DuBois, the second Bishop of Texas, a heroic man of great courage and endurance. All Texas and the Indian Territory were included in his bishopric. By 1874 there were one hundred thousand Catholics in this territory, the larger number of them within the confines of Texas. Since then the church has grown steadily throughout the state. Many Catholic schools have been established in the various commercial centres, several of them offering college work. In every large city and in several small ones there is an infirmary under Catholic control, where the call of charity never fails of answer. These sanitariums, nineteen in number, represent an outlay totalling perhaps two or three millions of dollars. Under the leadership of Rev. J. M. Kirwin, a man of uncommon force, the Knights of Columbus have influential organizations in the state, while at Austin the Paulist Fathers have a residence and chapel for the benefit of Catholic students in the University of Texas.

When the convention met at Washington, Texas, and the independence from Mexico was declared, so strong a prejudice existed against all ministers of religion that a section was introduced into the constitution disfranchising all preachers and forever prohibiting them from occupying any position of trust in the republic. Wm. C. Crawford, a Methodist minister and member of this convention, had this provision so modified that it only prevented preachers from holding seats in Congress and from executive office. The same provision was embodied in the state constitution

of 1846, but is no longer found in the state's organic law. A minister may, therefore, aspire to any public office in Texas and serve if elected.

Until the year 1836 Texas had a state church and only Catholic ecclesiastes were permitted freely to exercise authority in spiritual matters, or to celebrate weddings. Little opposition, however, was given by the authorities to the work of Protestant preachers. H. S. Thrall relates that during the progress of a Methodist meeting in 1832 near Nacogdoches some one reported it to Colonel Piedras, the Mexican commander.

Piedras asked: "Are they stealing horses?"

"No."

"Are they killing anybody?"

"No."

"Are they doing anything bad?"

"No."

"Then let them alone."

Mr. Fiske, who writes interestingly of a visit to Texas in 1831, tells of some incidents that occurred in Stephen F. Austin's original colony.

"One day during my stay at San Felipe I witnessed a ceremony which would have been regarded as a very extraordinary thing in our own country. A Roman Catholic priest had arrived there, on a tour of visitation through the colony, and offered to perform baptismal and marriage ceremonies for all who might wish to receive them. Having been invited where he was to receive applications and administer, at a particular house in the village, I attended with two or three friends, to see what would be done. Several settlers from the United States, who I knew had no inclination in favor of Roman Catholicism, and though they had received a Protestant education, presented themselves for baptism. These, as I had reason to believe, acted merely on a wish to

recommend themselves to the favor of the government. Several afterwards came with their wives and were married again, lest the legality of the Protestant ceremony should not be acknowledged, and stand as a bar between their descendants and their estates.

"The priest stated that he had married about five and twenty in one evening in some place in the country, where many colonists had assembled on timely notice being given of his visit. He was a jolly looking old man with very little of that sedate, venerable, or even intelligent aspect which we associate with an aged minister in our country. He showed some inclination to jest on the occasion. One of the young men who was standing ready for baptism caught my eye, and smiled. 'You must not laugh,' said the old man; 'if you do, you will always afterwards be laughing Christians: if you are sober now, you will be sober Christians all your lives.'"

Next after the Catholics, and near to them in numbers in Texas, came the Methodists, a preacher of which church first held services in Red River County in 1818. Six years later the first Methodist church was organized in that locality, the churches then being called societies. James P. Bowie of bowie knife fame and William J. Travis, both of whom fell at the Alamo, were among the early supporters of the Methodist Church. Bowie on one occasion protected some preachers from the attacks of a mob, and Travis contributed twenty-five dollars to the support of the first Methodist minister in Texas. These early Methodist ministers were robust men of indomitable energy. Of Rev. John W. Kinney Mr. Thrall writes: "He was negligent, even careless, in his dress. With unkempt hair, buckskin suit, and collar open, his appearance was anything but clerical. A Methodist lady of intelligence and refinement heard one Sunday morning that there would be preaching in the town, and, ordering her carriage, rode in. Mr. Kinney came sauntering in and took a seat at the table prepared for the speaker. He was

just in from a surveying expedition, wearing buckskin hunting shirt and breeches and cowhide boots. 'Is it possible,' said the lady to herself, 'that I have come to Texas to hear such a looking human as that preach?'" But the chronicle goes on to relate that Mr. Kinney when in his prime could stir the hearts of men as the leaves of the forest are tossed to and fro by a passing tornado.

Rev. H. G. Horton, still living in Seguin, Texas, writes even at a later date of the hard conditions under which ministers labored. He says on one occasion: "My dragoon pistol (which could kill an Indian at seventy-five yards) was placed on the stand by the side of the Bible. At the close of the morning service an old-fashioned class meeting was opened, the leader passing among the brethren and sisters and inquiring after the welfare of their souls, having a big six-shooter strapped to one side and a bowie knife to the other. In the midst of the meeting a scout dashed into camp shouting, 'Indians.' Some of the sisters had been making a racket over the conversion of one or two cowboys, and one good sister had gone into a trance." It may be needless to add that the trance passed away quickly.

Little regular ministerial work could be done under such conditions, and not until 1837 was there regular work attempted by the Methodist Church. The first superintendent of the Texas mission was Martin Ruter, and with him came Littleton Fowler and Robert Alexander. Mr. Fowler founded the Methodist Church in Houston, though the building was not erected until 1843, largely through the efforts of Mr. C. Shearn, after whom the church is still called. T. O. Summers, a distinguished Methodist minister,

after serving the Galveston church in 1840, became one of the pastors of the Shearn church.

At first Texas was a part of the Mississippi Conference. The first Texas Conference, including the entire Republic excepting a small strip on the Red River, was organized in 1840 with nineteen ministers attending. From the beginning missionary work was attempted among the Germans and Mexicans; for the Indians little was ever done. The *Texas Christian Advocate*, yet a most influential paper, was first published in Brenham in 1847. After shuttling between Houston and Galveston for a number of years the paper was finally moved to Dallas, the commercial centre of the state, where it continues to prosper. During the exciting period prior to the war some of the favorite secession orators were Methodist ministers. At the Secession Convention held in Austin one of these orators spoke for two hours. When the war did break out many ministers went as chaplains, some as ordinary soldiers, and a few wearing epaulettes. Naturally during the war all church work lagged.

One of the outstanding features of Methodist Church activity in Texas has been the attempt to multiply academies and colleges more or less directly under the management of the church. There have probably been fifty ventures, more likely a hundred, which have proved entirely abortive. The schools, because of lack of wisdom in their location and financing, or withdrawal of support, soon dwindled and died. Much loss of property has been occasioned by these disasters, though of course some good has been done. Among the most prominent of the early colleges were: Rutgersville, Wesleyan College at San Augustine,

McKenzie Institute at Clarksville, Soule College at Chappel Hill, Andrews Female College at Chappel Hill, Waco Female College at Waco, and Marvin College at Waxahachie. The tendency to multiply educational institutions has now been somewhat curbed, and several excellent schools under the care of this church, elsewhere listed, are in prosperous condition.

Texas Methodism has furnished two bishops to the Southern Branch of the Church, Seth Ward and E. D. Mouzon. Bishop Mouzon is also Dean of the Theological Department of the Southern Methodist University at Dallas. Other notable ministers of great prominence and influence were J. W. P. McKenzie, who established McKenzie College; I. G. John, for many years editor of the *Christian Advocate*; F. A. Mood, the founder and for many years president of Southwestern University; Dr. G. C. Rankin, a preacher of power and a forceful writer; and Dr. W. D. Bradfield, at present editor of the *Advocate*.

Rev. Caleb F. Ives began the work of the Episcopal Church in Matagorda in 1878. Twenty years later the field in Texas was considered of sufficient importance for the permanent and regular assignment of a bishop, the Rev. Alexander Gregg. A New Orleans newspaper publishes some impressions of an early Episcopal clergyman, the Rev. H. M. Pierce, which helps one to understand the Texas of that time:

"Neither man, woman, nor child is considered naturalized until they can ride a pitching horse, run down a mule rabbit, rope a wild cow, drink bad water and call it good. Texas is a curious country, a paradox. Everything is in the superlative, or contradictory, or marvellous. It is

the richest and the poorest; it has the best land and the meanest water; is the hardest country to live in, and has the most to live on; the days are the hottest, and the nights are the coolest; here are the most rivers, and the least water; the best roads, and the slowest travel; the finest building material, and the least use made of it; there are more clouds, and less rain; more plains, and less timber; more ropes to tie horses, and more estrays; a poor country for farming, and yet the most productive; the least work, and the largest yield; the horses are small, the cattle big; the frogs have horns, and the rabbits have ears like mules; the people are intelligent without general education, inventive without being tricky, refined without mannerism, rich without money, hospitable without houses, bold, generous, and brave. In fine, here is an empire in extent and resources, but in the slowest process of evolution; and yet destined to population, wealth, and power. There is much to admire, but little to deplore; many things to enchant, but few to offend; and for the people and their institutions there is a splendid future."

Within ten years after Bishop Gregg came to Texas the membership of the church had quadrupled, and five years later two additional Missionary Bishops were added to the "vast see, territorially sufficient for a college of Apostles." At present Texas is divided into four bishoprics, the Episcopal cities being Austin, Dallas, San Antonio, and Amarillo. Bishop Garrett of Dallas, Bishop Johnson of San Antonio, and Bishop Kinsolving of Austin have all impressed themselves strongly on the life of Texas—all of them men of vision, courage, and intellect, consecrated to the elevation of mankind. St. Mary's Academy for young women, Dallas, is the most conspicuous educational venture of the Church in Texas, although a promising beginning has been made at Austin, the enterprise, Grace Hall and Chapel, being thus far devoted only to the care of young women students of the University of Texas.

Among the Protestant churches the Baptists deserve

to rank along with the Methodists in furnishing pioneer preachers to aid in conquering the wilderness. Freeman Smalley, a Baptist minister, preached in Red River County as early as 1820, while Thomas G. Pilgrim organized the first Sunday-school in Texas at San Felipe in 1829. Of course this was done in violation of the law, but the alcaldes were indulgent and the Catholic influences in Texas usually generous. T. N. Morrell organized the first Baptist church in 1837 at Washington. Among the famous Baptist preachers of early days was R. E. B. Baylor, after whom Baylor University at Waco is named. In addition to being a preacher, Baylor was a noted Indian fighter, a teacher, a member of the Texas Congress, and for a time Justice of the Supreme Court of the Republic. He and two other Baptist preachers, T. W. Cox and T. N. Morrell, participated prominently in the Plum Creek fight with the Indians, one of the bloodiest battles ever fought with the redskins in the confines of Texas.

In 1848 the individual Baptist churches in Texas were organized into a state convention. At that time Dr. R. C. Burleson had become prominent in educational and church affairs. From 1851 to 1897 he was president of the first college enterprise of the Baptist denomination, now known as Baylor University. The Burleson family has played an important rôle in Texas affairs since colonization days, Albert S. Burleson, now Postmaster-General, being one of the younger members who has attained distinction. In early years there was lively discord among Texas Baptists on the question of the location and support of church institutions of higher learning. After this question was settled, by estab-

lishing Baylor University at Waco and Baylor Female College at Belton, feeling became even more bitter over questions of policy in the matter of church government. Individual churches, believing strongly in the doctrine of independence, feared the domination of state conventions. All these difficulties seem to have been smoothed away, and every branch of Baptist Church activity is now prosperous. Rev. E. C. Routh, the editor and manager of the *Texas Baptist Standard*, a paper of wide influence published at Dallas, estimates that there are in Texas 400,000 white Baptists and 200,000 negro Baptists. Mr. Routh also estimates that the members contributed to all purposes during 1915 two and one-quarter million dollars. Three hundred and twenty-two missionaries were employed the past year, through whom fifty-seven new churches were organized and fifty-one thousand new members secured. The church owns thirteen schools in Texas, ten of them aspiring to college rank, in addition to a theological seminary at Fort Worth and the medical college at Dallas. The total value of the property is probably not far short of five million dollars. Like the Catholics, the Baptists support sanitariums; two are already in operation, one in Dallas and another in Houston; sites have been secured in San Antonio and Waco for similar institutions. The largest orphans' home in Texas, founded and until now conducted by Dr. R. C. Buckner, is located near Dallas, and cares for six hundred orphans. The church and sanitarium property total in value nearly eleven million dollars. In addition to R. E. B. Baylor and R. C. Burleson, other Baptist ministers have impressed themselves upon the

state: the late Rev. J. B. Carroll, a strong preacher and for years president of the theological seminary; Rev. J. B. Gambrell, present secretary to the Executive Board of the General Convention; and Rev. Geo. W. Truett of Dallas, by many people regarded as the most eloquent minister in Texas.

Rev. Hugh Wilson is said to have organized a Presbyterian Church as early as 1838 at San Augustine. Two years later Rev. Daniel Baker, whose name is preserved in Brownwood, Texas, where Daniel Baker College is located, arrived in Galveston as a missionary. The next year Dr. Baker was present at the organization of the first presbytery in Texas at Independence. The various branches of this church work together harmoniously. The Presbyterians have fostered several good colleges in Texas. Austin College at Sherman takes its name from Stephen F. Austin, the Father of the Republic. Trinity College at Waxahachie is another well-equipped school for both boys and girls, while Weatherford and Milford each support a Presbyterian school for girls. The total valuation of school property held by the Synod of Texas amounts to more than one and one-half million dollars. A well-equipped Presbyterian theological seminary located at Austin should be mentioned. The Presbyterians give annually to all causes in their church more than half a million dollars.

Quickly following the Presbyterians, the Disciples of Christ, better known as Campbellites, began to preach in Texas, and so rapidly has the church grown that it is now fifth in rank in Texas. Some of the widely known adherents

to this church are Charles Carlton, who for many years conducted a school at Bonham, and Addison and Randolph Clark, the founders of Add-Ran College, which is now Texas Christian University, an institution of good standing and extensive patronage, located at Fort Worth.

Accurate, comprehensive, and recent statistics of the churches are not available. Based upon the population of 1910 and allowing the same proportionate increase in population and in church membership as prevailed in the decade from 1900 to 1910, the population of Texas on January 1, 1916, was more than four and one-quarter millions. The estimated church population was 1,500,000, of which number about 400,000 were Catholics. If these figures are correct—and they probably approximate the truth—the number of members in the leading denominations in Texas would run about as follows: Baptists, 490,000; Catholics, 375,000; Methodists, 375,000; Disciples of Christ, 60,000; Presbyterians, 85,000; Lutherans, 35,000; Protestant Episcopalians, 20,000; Jewish, 15,000; miscellaneous churches, 45,000. Among the churches not mentioned in the foregoing are the Adventists, Congregationalists, Dunkards, Friends, Latter Day Saints, Spiritualists, Unitarians, and Universalists. Other religious statistics as given by the Texas Almanac published by the Galveston-Dallas *News* in 1914 are as follows: Number of church organizations 12,500; number of church buildings, 9,456; value of property, \$26,890,675; amount of debt, \$1,356,000, number of Sunday-schools, 9,600; number of Sunday-school teachers, 63,500; number of Sunday-school pupils, 600,000; seating capacity of churches, 2,900,000; value of parson-

ages, \$3,000,000. The Young Men's Christian Association in Texas has forty active organizations, nineteen of which own buildings and equipment. Among these organizations are ten for railroad men and twenty for college men. The total membership for the state is 14,173, with an average daily attendance of 5,000. The total yearly budget for the forty organizations is about \$250,000, the total property value of their holdings \$1,350,000. The Young Women's Christian Association has five organizations, with a membership of 6,700, and property valued at \$372,000.

In an attempt to tell the story of the churches, the names of great preachers and many facts and figures have been crowded together. Vain, however, is the effort to depict the spiritual work that has been performed or to make known the consecrated souls by whom the work was done. In every crisis the apostles of the church have been on hand to help and succor. Devout and strong men founded the churches in Texas; devout and strong men yet control them. Historians usually pass such men by with only a word of comment, but no thoughtful person can be blind to the fact that their noble and unselfish lives, their stand on questions of moral moment, are among the very powerful civilizing influences in the modern state; for they helped mould the public sentiment afterward crystallized into law. So varied is the story, so wealthy in incidents are the details, that a bare mention only of some outstanding phases can be crowded into one chapter. The preceding inadequate comments are drawn from a mass of biographical data of individuals. No writer for any one of the churches, or all of them, has yet attempted to fuse into a connected

story an account of the work of evangelization in Texas. It is not enough to say that the churches have been an important element in the building of Texas; the finer things for which the churches labor alone make the building of Texas worth while.

CHAPTER VIII

THE NEWSPAPERS

THE COUNTRY EDITOR

He might have been a millionaire,
And won financial fame,
Or sat in a director's chair,
Had money been his aim.
He chose instead to spend his years
In service poorly paid,
And with the pastepot and the shears
An humble living made.

He chronicled the town's events—
The local goings-on;
His fellow-townsmen's hopes and bents
Inspired his lexicon.
He felt the public pulse that beat
Around him, and he tried
To make his little country sheet
A thing of local pride.

—*Editor and Publisher (New York).*

A CIRCULAR asking for certain information was sent recently to all the papers of Texas. Scrawled on the back of one returned circular which had found its way to the quondam editor of a now defunct "Rustler" were the following phrases: "Suspended publication," "Turned up its toes to the daisies," "Hors de combat," "Rustled out." In short, the "Rustler" rustled no more. This is by no means an unusual experience. The death rate among Texas papers is yearly just about what the human death rate is. But the birth rate is higher than the

death rate, as evidenced by the fact that, since 1869, when N. W. Ayer gives ninety-five publications in the state, there has been a steady increase in the number until 1915, when the same authority places the number at 1,081. The 1916 Ayer Directory gives 1,043, which means that there were many fatalities during 1915. The years of decline in the number of publications issued in the state correspond roughly, of course, to years of commercial depression. For instance, in the year 1873 there was a net loss of one from that of the preceding year, in 1876 a net loss of five, in 1889 a net loss of four. But the greatest loss recorded is for the year 1915, just adverted to, when the number of publications fell from 1,081 to 1,043, while the losses of several other years, from a percentage standpoint, are almost as great: 1897, a loss of fifteen; 1899, a loss of thirteen; 1902, there was no gain, while in 1903 there was a net loss of fifteen. In the years 1893 and 1907 the birth and death rates practically balanced.

The years of greatest net increase are 1891, when there were sixty-nine more births than deaths; 1883, which shows a net gain of forty-four; 1885, a net gain of forty-five; and 1910, a net gain of thirty-nine.

The most important publication centres of Texas are San Antonio, Houston, and Dallas, the latter city being the home of more than fifty newspapers, magazines, and periodicals, thus, with the exception of Nashville, leading the entire South as a publishing centre.

While the growth in number of publications in the last fifty years has been steady and strong, it has been no more phenomenal than the rise in circulation of the more impor-

tant papers of the state. There are now seven weeklies having circulation between 10,000 and 20,000, and one, an agricultural journal, *Texas Farm and Ranch*, distributes 96,000 copies of each issue. There are four semi-weeklies whose circulation exceeds 10,000 each, three ranging from 15,000 to 34,000, and the remaining one distributing 150,000 of each issue. In the same general class are four monthlies, three of which have a circulation of 19,000, 20,000, and 30,000, respectively, and one of which reaches a monthly circulation of 129,000. Classifying the publications with regard to a circulation of 10,000 or more, we find seventeen dailies included, seven of which issue from 10,000 to 20,000; nine from 20,000 to 50,000, and one having a circulation greater than 50,000.

Publications in languages other than English are few in Texas. German publications lead in number with twenty-four, Spanish papers are second with nineteen, the others are rather in the nature of accidents: Italian three, Bohemian two, Polish one, and Swedish one.

There are seventeen religious periodicals published in Texas, three of which have a circulation of more than 15,000 each.

Of the numerous attempts to establish a literary magazine the only one that has attained a large circulation is *Holland's*, which has run for several years over the 100,000 mark. And even this magazine is more in the nature of a woman's magazine, although the literary feature is steadily emphasized.

The great majority of the papers of Texas are served, of course, by the Associated Press. It has six or seven morning



SAN FERNANDO CATHEDRAL, SAN ANTONIO

Foundations laid in 1734. The oldest church in Texas yet used as a house of worship



GEORGE B. DEALEY
Vice-President and General Manager, *Dallas-Galveston News*



Photograph by Chas. Erwin Arnold
DALLAS NEWS BUILDING, DALLAS
The home of a great newspaper of the South

papers and afternoon papers which take the full leased wire report. It also has a large number of pony papers—that is, small papers which take a certain number of words ranging from fifty to fifteen hundred a day according to the ability of the paper to pay for the service. The United Press has one full leased wire afternoon paper in Texas and a large number of ponies. It also serves a number of afternoon papers with a service for publication on Sunday morning. The International News Service has one leased wire report coming into Texas to a morning paper, and also supplies the Saturday night service to several papers which get out Sunday morning editions.

The oldest surviving paper now published in Texas is the *Galveston News*, which was established in 1842. The San Antonio *Express*, old as papers go in Texas, was established during the last year of the Civil War, as was the Jefferson *Jimplecute*. It is quite certain that a paper was established in Dr. James Long's colony at Nacogdoches as early as 1819, although the name of it has been lost. The small sheet which was printed in 1816, "when Galveston was occupied by Commodore Aury, Colonel Mina and Captain Perry," containing "army orders and kindred matters," could scarcely be called a newspaper. There were, however, in the twenties and thirties some real "root-hog-or-die newspapers," as one Texas editor expressed it. Texas journalism seems to have begun with the establishment in 1829, by Godwin Brown, of the *Texas Gazette* at San Felipe de Austin. It lived three years, thus setting the pace in longevity for Texas papers of that early era. In 1830 the *Texas Gazette and Brazoria Commercial Advertiser* was begun

in Brazoria by W. D. Anthony. In 1832 Anthony purchased the San Felipe papers, and his two papers were consolidated and published under the name of the *Constitutional Advocate and Brazoria Advertiser* until his death, a year afterward. The next three or four years saw the birth and demise of the following papers: *Texas Republican*, *The Advocate of the People's Rights* (Brazoria); *Telegraph and Texas Register* (San Felipe de Austin); the *Commercial Intelligencer* (Galveston); also a paper was started in Matagorda and one in Nacogdoches, the names of which, even, have vanished from the memory of man.

In 1842 the *Galveston News* first saw the light, it being the only paper of that early era now alive. The forties, fifties, and sixties could not have been years of rapid journalistic growth in Texas, since the average annual excess of birth rate over death rate in those decades was but three. In other words, at the end of the thirty-year period there were but ninety-five Texas papers in existence.

Recognizing the imperative demand for better trained journalists in the state, and following the lead of several other higher institutions of learning in the country, the University of Texas in 1914 established a School of Journalism, in which there are more than fifty students preparing for journalistic work.

CHAPTER IX

UNION LABOR AND LIFE INSURANCE

UNION labor has had a powerful influence upon legislation in Texas in the last few years. It was not until 1903 that a Joint Legislative Board was formed representing all the unions and thus presenting in the legislature a solid front for labor measures approved by the state federation. The activities of organized labor in legislation began as far back as 1889 when the State Legislature Board of the Brotherhood of Locomotive Engineers was formed. Other railroad brotherhoods at one time or another attempted to maintain legislative boards with varying successes, until it became apparent to the railroad men that they must in some way get the united support of all organized labor in order to become really effective in securing legislation favorable to labor and in defeating unfavorable legislation. It was upon motion of the railway brotherhoods that the idea of the Joint Legislative Board under the general direction of the state federation of labor (formed in 1900) came into existence. This Board has been active in legislation at every legislature which has been in session since its formation. It makes a regular biennial report to the state federation containing an account of the measures supported and those thought to be inimical which were opposed, together with a synopsis of the record of each legislator, his nativity, address, occupation, etc.

The two big achievements of labor in the field of legislation, at least those that are so considered by labor leaders, are the creation of the Industrial Accident Board and the Department of Labor. The former measure, passed by the Thirty-third Legislature, is referred to generally as "The Workmen's Compensation Act," and provides for compensation for certain employees and their representatives for personal injuries sustained in the course of employment, and for the creation for an insurance association to insure and guarantee such payments, and also for the investigation of claims and adjudication thereof for consenting parties. The operation of this law has not been entirely satisfactory to labor, and during the last session of the legislature (thirty-fourth) it was sought to amend the same in such a way as to perfect its administrative features, confer more powers on the Board, penalize insurance companies for failure to make prompt settlements on order from the Board, and, in other ways, strengthen the measure. However, none of these amendments were passed, pending a decision of the Supreme Court as to the constitutionality of a part of the law which had been certified up to it by the Third Court of Civil Appeals.

The office of Commissioner of Labor was created in 1909. The work of this office is largely that of collecting and compiling statistics concerning the condition of the laboring classes in the state. The Commissioner is now engaged in the work of making a complete survey of the condition of labor in all of the important industries of the state, except, of course, the laborers engaged in agriculture. This survey will show, when completed, wages obtaining in the

principal industries, the cost of living, and the living conditions of the laborers.

Speaking, generally, of the labor union movement in Texas, Mr. W. E. Leonard, Instructor in Economics in the University of Texas, says in his essay, "The Population of Texas and Its Potentialities as a Labor Force":

"It is from the manufacturing, mining, and transportation industries, together with the building trades, that labor unions are chiefly recruited in this State. A vigorous forward movement in the organization of labor seems to have begun shortly before 1900. In that year the State Federation of Labor was organized, and this not only gave coherence to the union movement, but ever since then it has been an active organizing agent. Its present strength and influence is unquestionably great, and is increasing. There are in the State some 600 locals, and in twenty cities are found central labor councils, these representing the local interests of labor in any community. These local and city councils are federated with the State organization, and this with the American Federation of Labor.

"The trade union type undoubtedly prevails, although there are a few 'industrial unions,' as among the dock workers, and in the brewing industry. It is this latter type of organization which promises a rapid growth in the future. The radical forms of unionism have not yet appeared in Texas, nor has socialism any very strong following among the wage earners of the State.

"The most conservative statement as to the number of union men in Texas is 50,000, and of these 10,000 belong to the railway brotherhoods. Other estimates place the number at 90,000, but the former number is more likely the truer statement. The laws of Texas are very favorable to organization, and there is no reason to doubt that unionism, among those groups where it is possible, will rapidly increase.

"It is greatly to the credit of the movement that only conservative policies have been advocated. On the whole, the labor press of the State is well edited, and has no very radical tendencies. In all there are some twenty periodicals which reach a rapidly growing labor constituency."

The Robertson Law, becoming effective July 12, 1907, provided, among many other things, that a life insurance

company in order to do business in Texas had to invest and keep invested in Texas securities 75 per cent. of the "aggregate amount of the legal reserve required by the laws of the state of its domicile to be maintained on account of its policies of insurance in force written upon the lives of citizens of this state." The phrase "Texas securities," though carefully defined, offers, however, to the insurance companies a wide range of stable securities. Rather than comply with its provisions, the following companies withdrew from the state: Columbian National, Boston, Mass.; Des Moines Life, Des Moines, Iowa; Equitable Life, New York, N. Y.; Fidelity Mutual, Philadelphia, Pa.; Germania Life, New York, N. Y.; Home Life, New York, N. Y.; Manhattan Life, New York, N. Y.; Massachusetts Mutual, Springfield, Mass.; Mutual Benefit Life, Newark, N. J.; Mutual Life of New York, N. Y.; National Life, Montpelier, Vt.; New York Life, New York, N. Y.; Northwestern Mutual, Milwaukee, Wis; Penn Mutual, Philadelphia, Pa.; Prudential, Newark, N. J.; Reliance Life, Pittsburg, Pa.; Security Mutual, Binghampton, N. Y.; Travelers' Insurance Co., Hartford, Conn.; Union Mutual, Portland, Me.; Washington Life, New York, N. Y.; Wisconsin Life, Madison, Wis.

This wholesale withdrawal caused many Texas companies to enter the insurance field. The names and capital stock of the Texas companies doing business in 1916 follow: Amarillo National Life, Amarillo, \$150,000; American National, Galveston, \$250,000; Amicable Life, Waco, \$820,000; Bankers' International Life, Austin, \$100,000; Equitable Life, San Antonio, \$100,000; First Texas State Insurance Co., Galves-

UNION LABOR AND LIFE INSURANCE 409

ton, \$100,000; Fort Worth Life, Fort Worth, \$105,700; Gibraltar Life, Paris, \$135,000; Guarantee Life, Houston, \$100,000; Great Southern Life, Houston, \$500,000; Prudential Life of Texas, San Antonio, \$140,800; San Jacinto Life, Beaumont, \$100,000; Southern Union Life, Waco, \$191,480; Southland Life, Dallas, \$294,210; Southwestern Life, Dallas, \$250,000; Texas Life Insurance Co., Waco, \$200,000; Two Republics Life, El Paso, \$150,000; Wichita Southern Life, Wichita Falls, \$151,550.

The total amount of assets of Texas life insurance companies as shown by their reports made December 31, 1914, is \$18,000,000; while these same reports show the total amount of insurance carried to be \$172,000,000, and the total number of policies, 261,012.

CHAPTER X

PROHIBITION AND LOCAL OPTION

THE first liquor law in Texas, passed in 1837 by the Congress of the Republic, merely levied an occupation tax upon a liquor merchant, which was no higher than the tax paid by a merchant dealing in any other product. The tax was intended to defray the expense of the government, and no attempt was made at traffic regulation. In 1840, however, an annual tax of \$250 was placed on the liquor seller in addition to a bond of \$2,500 to "constantly keep an orderly and reputable house, and to prevent gambling, quarrelling, and other misconduct." Under the present law a general liquor dealer pays an annual tax of \$750, and must operate under a bond of \$5,000. A dealer in malt liquors pays a yearly tax of \$125, and is under a bond of \$1,000. Furthermore, in each bond are twelve conditions, the violation of any one of which may bring forfeiture of the license. The most recent enactments affecting the saloons are the Sunday closing law and the 9:30 closing law. It may be said that both of these laws are as well enforced as any statutes in Texas. Very few saloons are ever open on Sunday, and all close their doors promptly at 9:30 p. m. No liquor can be sold on any railroad train in Texas; nor can it be drunk except in violation of the law. C. O. D. shipments into "dry" territory are forbidden by law. A number of interesting incidents have occurred during the years of liquor agitation

in Texas. In 1854 a law was passed forbidding except by express county legislation the sale of liquor in less quantities than one quart. Of the forty-one counties voting on this subject and reporting to the secretary of state only six voted for a license for liquor to be sold by the "drink up." This law, however, was afterward held to be unconstitutional, and was not put into effect.

Among the most fruitful sources of influence that brought about the first vote on state-wide prohibition in 1887 was the work of the United Friends of Temperance through its juvenile branch, the Band of Hope. The boys and girls of many thousand communities of Texas were organized into groups who sang temperance songs, spoke temperance declamations, and gave amateur plays which turned on tragedies that grew out of the liquor traffic. The effect of the activities of these young people on the public mind was tremendous. Largely through the efforts of Mr. E. L. Dohoney of Paris, the insertion of a local option law in the Constitution of 1875-1876 was secured. The growth of local option, however, was slow. The first county to vote favorably on the question was Jasper, which has ever since remained "dry." Jones County in west Texas was organized as "dry" territory, and no saloon has ever stood within its limits. After an exciting contest, the bitterness of which was not entirely wiped out after a decade, the prohibition amendment to the constitution was defeated by a majority of 91,357 votes. The total vote cast was 359,897. Again in 1911 the question was resubmitted to the people when the total vote was 468,489. The anti-prohibitionists were again victorious, but by a smaller vote, the majority being 6,297.

From 1887 to 1911 local option sentiment fluctuated. Many counties, after they had voted against the saloons, had great difficulty in enforcing the laws; then because the law could not be successfully enforced, the people would vote



LOCAL OPTION MAP

Explanation of Map

White, all dry, 186 Counties
 Gray, part dry, 49 "
 Black, all wet, 17 "

TOTAL..... 252 "

back the saloons. At the present time nearly every county election (and they are being frequently held) results in victory for the prohibitionists. Three-fourths of the people in Texas and seven-eighths of the area of the state are under

local option laws which are rarely violated. Furthermore, by examining the prohibition map of the state it can be seen that the "wet" belt extends along the Rio Grande River where there is a large Mexican population, and in the cotton belt of Texas where there is an excess of negroes. It may be added, also, that no county of Texas containing a large city has in effect a county local option law. Fort Worth, Dallas, Waco, Houston, Galveston, Beaumont, El Paso, and San Antonio are all "wet" towns. It now seems probable that another prohibition election will be held in 1917. For several years the anti-prohibition sentiment has been principally fostered through an organization known as the Anti-Saloon League of Texas. Early in 1916 the breweries of Texas paid penalties to the state amounting to \$281,000 and costs on the charges of violating the anti-trust laws and using corporate funds to influence an election.

CHAPTER XI

WOMEN'S ORGANIZATIONS

THE Texas Federation of Women's Clubs has a strong organization and a numerous membership, as the tabulated statement below indicates:

District	Number of Towns	Number of Clubs	Membership of Clubs
1	39	79	2,032
2	29	75	3,553
3	33	66	1,064
4	57	89	6,073
5	45	92	1,752
6	31	53	1,255
Totals	234	454	15,729

These figures are taken from the Year Book of 1914-1915 and are presented in this form to indicate the system pursued in organization, as thorough and far-reaching as the machinery of a political party. In the year and a half since the book was printed the Club Extension Committee has worked to such effect that the individual membership has reached 20,000. Recently, too, a further perfection of the Federation machinery was attained by the completion of the \$10,000 endowment fund, a monument to the two years' administration of the retiring President, Mrs. Henry B. Fall, of Houston.

The history of federated women's clubs in Texas dates

from 1897. Until that year, although there were many scattered clubs in the state that were naturally allied in interests, each had stood alone. It is hard to overestimate the benefits of coöperation as applied to such problems as the marketing of perishable crops and the establishment of rural centre high schools, and there is no doubt that the spirit of coöperation has been fostered throughout the whole state during the past twenty years by the organization for combined effort epitomized in the Women's Club Federation movement. It seems a far call from the readily admitted benefits of marketing coöperation to the Federation of a group of clubs; however, in each case it is merely a matter of breaking down the spirit of suspicion and selfishness and greed and the development of the ability to work together for the common good. In 1897, then, the Federation of Women's Clubs was evolved. Four years later Mrs. Percy V. Pennybacker, from the beginning of the club movement a vigorous and effective worker in its interest and destined a dozen years later to assume national prominence as the President of the General Federation of Women's Clubs of the United States, became the third president of the state organization. In all, ten Texas women have filled this honorable and responsible position.

Under these ten administrations, what has the Federation stood for in Texas? As is usually true of the work of women, the best results are intangible in character. Broadly speaking, besides being an educative force toward coöperation, it may be said that the organized women's clubs have been behind every humanitarian law written on the statute books for the past twenty years and have lent their

best efforts to the betterment of education and to civic improvements. Some of these laws they claim as their work, since the public opinion that led to their adoption was largely of their moulding. The establishment of public libraries was the first broad field to occupy their labors, the local library being backed by the local women's club, in turn aroused and inspired by the Federation; and the establishment by law of a State Library Commission and a Legislative Reference Library is a further outgrowth of the movement for free libraries. In like manner the women's clubs stood back of the Juvenile Court Law, the Poll Tax Amendment that diverted a per cent. of the poll tax receipts to the Common School Fund, the appropriation that built the Woman's Building at the University of Texas, and the Compulsory Education Law of 1915. More than moral suasion was asked of the Federation in the case of the establishment of a Girls' Industrial School. When the women demanded such a school the legislature replied by appropriating \$25,000 for such a purpose, contingent upon the Federation's raising a like amount. The challenge was accepted and the school operates in Texas to-day. Meanwhile the education of other than the delinquent girl has occupied the attention of the women, and thirty-three Federation Scholarships for the aid of girls unable to pay for their education are available in twenty-one of the state's institutions of higher learning. Home Economics Week, a six-day course of lectures on the needs of the home and the community conducted by the Domestic Economy and the Extension Departments of the State University, through the direct coöperation of the organized women's

clubs, has been made so successful and so largely attended that, after the close of the course in Austin, the week's work was repeated in Fort Worth in March and in Dallas in April, and in about twenty other smaller cities.

Such are some of the accomplishments of the Texas Federation of Women's Clubs. The principal work now projected comprises a state-wide campaign for the betterment of rural conditions. The most valuable service of women's clubs is, after all, the enlarged interests brought into the lives of the individual membership; and nowhere is such service needed as in the country and the small town. As a preliminary step toward constructive rural betterment work, county federations are now being organized by the State Federation; and strong committees are preparing to launch through this machinery plans for rural school betterment, the building of teacherages, the introduction into country homes of labor-saving devices, the promotion of good roads, and the establishment of community libraries and rest-rooms.

The woman suffrage cause has many friends in Texas. For fifty years lively interest has been manifested by Texas women in the movement to secure suffrage for themselves. As early as 1866 Mrs. C. M. Wallins, a Texan, spoke before the United States Senate on *Reconstruction and Universal Suffrage*, a unique occasion, as it was the first and last time a woman has ever been granted a like privilege. And although after this, and other early efforts that link the names of Texans with the movement, there were many years when there was little progress whatever apparent, still Texas supporters of votes for women point to a long

history of their cause in the state and claim the recent wide and rapid-growing public interest as in part the cumulative result of labors and propaganda now all but forgotten.

One indication of the strength of any movement is the sort of people who lead it. There is a tradition among equal suffrage workers at large that any Southern state evincing marked activity in securing the ballot for women does so under the leadership, not of some one strong woman, but of some group of blood sisters of the cryptic number *three*. It was the three Misses Clay that led in the fight that made Kentucky the first state to grant any form of suffrage to women. In 1898 Louisiana granted a taxpayers' franchise to women, due largely to the efforts of Miss Kate Gordon and her two sisters. To clinch this tradition into little short of a superstition, the advancement of the cause in Texas, which national leaders of experience are now predicting will be the first Southern state to grant women full franchise, owes much to the labors and the generous financial support of Miss Annette Finnigan, of Houston, and her sisters Miss Finnigan of Houston and Mrs. Fain of New York. In pointing out the names of the women whose names are linked with the development of the Suffrage organization in Texas, perhaps it is well just here to mention Miss Eleanor Brackenridge, of San Antonio, and Mrs. Cunningham, of Galveston. The latter now President and the former Honorary President of the Texas Woman Suffrage Association. Mrs. Mariana Folsom was one of the pioneer suffrage lecturers in Texas; and the name of Mrs. Anna E. Walker, of Austin, present Treasurer of the State Association, has for



MRS. HELEN MARR KIRBY
Dean of Women of the University of Texas



TWO PROMINENT TEXAS WOMEN

MRS. PERCY V. PENNYBACKER, ADSTUN, TEXAS
Ex-President of the Federated Women's Clubs of the United States



OLD STYLE TEXAS COURT HOUSE
Which always stands in at the centre of the town Cleburne, Texas



NEW TYPE OF CONCRETE COURT HOUSE, EDINBURG, HIDALGO COUNTY

years been associated with every step forward that the equal suffrage movement has made.

At intervals since 1866 the fight to gain the ballot for women has occupied Texas legislatures and conventions. A resolution to grant women full suffrage was lost in the constitutional conventions of 1868 and 1875; while measures to effect the same end have been introduced, fought out, and lost in five different legislative sessions! Two Texas United States senators, Hon. J. W. Flanagan in 1875 and Hon. Morris Sheppard thirty years later, have worked and voted for woman suffrage in the United States Senate.

Organized state-wide efforts among women to secure the ballot for themselves really began in 1912 with the formation of a strong Equal Suffrage Society. Largely through the influence of this organization, strong pressure was brought to bear on the two succeeding legislatures. In 1915 the measure passed to the last reading, in the House of Representatives, only to be lost. But as an indication of the strength the movement has gained it is to be noted that within the last few years universal franchise has gained the endorsement of various influential organizations: the Texas Woman's Press Association, the Texas Farmers' Congress, the Texas Federation of Women's Clubs, and the State Federation of Labor—the last named making suffrage for women one of its five preferred subjects for legislation.

Since its revival a few years ago, the Texas Woman Suffrage Association has grown with great rapidity. It now estimates its membership at 10,000 and its precinct clubs at over fifty. Estimates is used advisedly here; for with an enthusiastic membership campaign now waging,

clubs are being initiated at the rate of one and sometimes more daily, and members are signing up too rapidly for the central office to furnish an accurate statement of their numbers. The immediate aim of the organization, as determined at the Executive Board's meeting in January, 1916, is to devote its whole energy for the time to strengthening its own organization, to securing before the annual state convention a capable chairman for each senatorial district, a county chairman for each county, and a local club in each precinct. For this purpose, two national organizers are in the field for the first four months of the year; and a number of energetic local chairmen have been secured. And until their own forces are thus thoroughly organized, the Texas friends of equal suffrage for women expect to waste no further efforts in vain attempts to effect legislation.

With *Texas Dry* as its motto, the Woman's Christian Temperance Union of the state enters in 1916 its thirty-third year of service. In 1882 Miss Frances Willard in a personal tour of Texas pioneered for the cause and organized unions in a dozen towns, Paris supporting the first local union. State organization was effected a year later. These leaders of the work thirty years ago found themselves confronted with difficulties discouragingly out of proportion to their strength, no money, inexperienced leadership, and an indifferent public with little but pluck and singleness of purpose to counterbalance them. Pioneer days in any endeavor develop the heroic spirit; and it is not without just cause that the names of three Texas women—Mrs. Jennie Bland Beauchamp, Mrs. S. C. Acherson, and Mrs. Helen

Stoddard—succeeding presidents of the young organization from 1883 to 1888, are set into the walls of the Frances Willard Memorial Temple in Chicago. It is worth noting, also, that during its first decade, in 1888, the Texas W. C. T. U. aligned itself with woman suffrage by adopting a resolution endorsing universal franchise as the speediest and surest method of furthering its own ends.

The movement thus begun claims in the past third of a century to have fathered—mothered, perhaps, is the correct term—a group of humanitarian reforms. Quoting H. A. Ivy's "History of Prohibition," the organization is responsible for creating public sentiment and crystallizing it into the following laws:

Raising the age of protection from twelve to fifteen years.

Scientific temperance instruction law.

Anti-cigarette law.

Anti-cocaine law.

College of Industrial Arts bill.

The anti-slot machine law.

The pure food law.

Anti-child labor law.

Anti-card playing law.

Anti-C. O. D. express liquor law.

In the work of the Union the negroes of the state have shared, under the leadership of Mrs. E. E. Peterson of Texarkana.

After the failure to carry state-wide prohibition at the polls in 1911, the wearers of the white ribbon badge, though somewhat buffeted by defeat, are again actively in the field. The state president, Mrs. Nannie Webb Curtis, of Waco,

wields official power over 110 local unions with a paid-up membership of 3,500, and the treasurer expends annually \$10,000. Categorically stated, the Texas W. C. T. U. plans to work out the following plans: to assist the National Prohibition Association by giving cash prizes and medals to Texas college students for orations and essays on temperance; to secure circles of ten or more members in each precinct; to disseminate information through leaflets, through the coöperation of county papers, and through temperance libraries of ten books each to be placed in every college library in the state, and by sending the official organ to each college and public library, to each Y. W. C. A. and Y. M. C. A., to the six largest daily newspapers, and to the pastors of the seven largest cities of Texas.

CHAPTER XII

THE CASE OF THE RAILROADS

IN THE early days of railroad building Texas was generous in land grants, and, in some cases, paid cash subsidies for every mile of track laid. Then came the era of one-man exploitation and what Mr. Ripley of the Santa Fé called a "saturnalia of speculation." To remedy these evils in Texas a State Railroad Commission was created and a stock and bond law was passed. Later public prejudice was further aroused by the free-pass system and by the discovery that many roads were giving rebates to favored shippers. Now, when railroad building has stopped in a state that must have transportation if it is to go forward, when railroad properties are run down for lack of money to put them in good order, relief under existing conditions is difficult to obtain, mainly because public opinion is to be reckoned with, and, in a democracy, what the people think, even if they think without good reason, has great weight with their elected officers. Texas railroad managements in the past were guilty of unfair practice; now when the railroads are in trouble the people either are indifferent or seem to feel that satisfaction that a man enjoys who sees his enemy suffer. Many of the big Texas lines, including the Missouri, Kansas & Texas Railway Company of Texas; the International & Great Northern; the Fort Worth & Rio Grande; the St. Louis, San Francisco & Texas, and other Texas railroad cor-

porations are in the hands of receivers. Few, if any, pay dividends to their stockholders; their combined deficits for the past four years run thus:

1912.....	\$3,300,000
1913.....	1,600,000
1914.....	8,100,000
1915.....	6,700,000

The railroads need money, and they can't get it, for two reasons: the Railroad Commission of Texas declines to increase the established freight and passenger rates; the legislature refuses to modify the laws affecting the issuing of stocks and bonds so as to make it possible to secure revenue from that source. Meanwhile, the trains run on, railroad managements are in despair, and the people don't seem to care. The Texas State Tax Board valued in 1914 the 15,000 miles of railway lines in the state at the total of \$473,000,000, less by \$141,000,000 than the total outstanding stocks and bonds and other indebtedness. These huge properties in Texas, while the state is generally prosperous, increasing rapidly in wealth and population, are making no income that they can share with their stockholders; some cannot pay interest on their bonds and are, therefore, being subjected to costly administration under the direction of the courts. Some people believe either that they are concealing their incomes or that a fair division of profits is not being made by the parent roads in cases where great trunk lines have branches in Texas. Representatives of the railroads strenuously deny both charges. Mr. Hiram Glass, the attorney for all Texas railroad

lines with offices at Austin, thus puts the case for the railroads:

The reports of the Railroad Commission of Texas show that for eight years—1908 to 1915 inclusive—the railroads of the state have suffered a net corporate loss of \$20,562,816.55. The average capitalization per mile of all the railroads in Texas, as shown by the Twenty-third Annual Report of the Railroad Commission is: capital stock, \$8,276, bonds \$22,942 per mile of railroad, or an aggregate capital of \$31,218 per mile, just about one-half of the average capitalization per mile of all the roads in the United States. The capitalization of the Texas railroads is much less than their value, yet for seven years—1908 to 1914 inclusive—they have earned only .315 per cent. net operating income on their capitalization. This is not enough to meet their fixed charges, hence the deficit of more than \$20,000,000 as a result of eight years' operation. This result has been produced by continual reductions in freight rates by the Railroad Commission, without foreseeing the very substantial and material increased expenses of operation, increased cost of materials, and especially the increase in the wages of employees, the end of which is not yet in sight.

The Railroad Commission of Texas has always been composed of able and patriotic men, with only such training and experience in that line of business, however, as they have received after assuming their official positions. Results speak for themselves and need no further comment. In this connection it is encouraging, however, to note that the Railroad Commission of this state has recently shown a more sympathetic and liberal disposition toward the roads and a broader grasp of their responsibilities to the public and the railroads.

Another handicap that is proving hurtful to the railroads of the state is the narrow and illiberal construction given the Texas Stock and Bond Law by the Railroad Commission. That law among other things provides: "Hereafter no bonds or other indebtedness shall be increased or issued or executed by any authority whatsoever, and secured by lien or mortgage on any railroad, or part of a railroad or the franchises or property appurtenant or belonging thereto, over or above the reasonable value of said railroad property; provided, that in case of emergency, on conclusive proof shown by the company to the Railroad Commission that public interest or the preservation of the property demand it, the Commission may permit said bonds, together with the stock in the

aggregate, to be executed to an amount not more than 50 per cent. over the value of said property." The law further makes it the duty of the Railroad Commission to value the railroads of the state, which they have done.

The Commission will not approve and authorize the registration of stocks and bonds except upon and to the value of actually completed railroad and its proportionate shares of equipment. It seems clear, however, that the law above quoted authorizes the issuance of bonds secured by lien equal to the reasonable value of the railroad property, regardless of the amount of outstanding stock, and in cases of emergency may issue bonds, secured by lien, in excess of the value of the railroad property, provided such bonds and the outstanding stock is not more than 50 per cent. over the value of the property.

This interpretation of the meaning of the above-quoted provision of the Stock and Bond Law operates to the prejudice of the older railroads of the state, whose stocks and bonds were issued before the enactment of the law in 1893, when the present outstanding bonds mature and it becomes necessary to refund. The outstanding stock of such companies being relatively large limits the amount that can be issued in refunding bonds, in many cases to much less than is desired by good financing, or the necessities of the companies and the safeguarding of the public.

The above interpretation of the law also operates to the prejudice of companies formed since its enactment, in that the capital stock is generally limited to \$1,000 per mile, the minimum allowed by law in this state, so as to enable the companies to issue bonds secured by a lien equal to the entire value of the railroad property, less the \$1,000 per mile of capital stock. This operates to depress the market for such bonds, as it is generally thought desirable, by the purchasers of such bonds, that the paid-up capital stock should be in a more reasonable ratio to the bonds.

Under the present ruling of the Commission, no bonds can be issued or registered until that part of the road covered by them is actually completed and valued by the Railroad Commission. This makes it extremely difficult to finance and build a railroad. It has been suggested, with much reason, that the companies seeking to build railroads into the many sections of the state that are now unprovided with transportation facilities should be allowed to issue, register, and sell bonds, in order to provide a fund for construction, with proper safeguards to insure the investment of the money for the purposes only of constructing

and equipping the railroad. This, it is believed, would prove a wonderful impetus in railroad construction in the state, which now seems to have come to a standstill.

Another law of the state that makes it exceedingly difficult to obtain money for building new lines of railroad is that provision of the statute which makes all subsisting liabilities and claims for debts for personal injuries sustained in the operation of the railroad, or by any receiver thereof, and for all loss and damage to property sustained in the operation of the railroad, or receiver thereof, and for all current expenses of such operation, including labor, supplies, and repairs; and further providing that all such subsisting claims and liabilities which shall have accrued within two years prior to the beginning of receivership resulting in the sale of property and franchises, or within two years prior to the sale, if the property be sold otherwise than under receivership proceedings, or on which suits have been brought within two years, superior to all pre-existing mortgage liens on the property. Individuals or trust companies with money to loan naturally hesitate to invest that money in bonds, although secured by first liens on railroad property, when they know that all of the above-mentioned unsecured claims, which probably might under some circumstances amount to enough to absorb the property, will take precedence over the mortgages securing the bonds. They naturally look on such mortgages as security that does not secure.

Until railroad construction becomes more inviting, the people who need the services of the carriers are much more vitally interested in providing proper remedies and encouragement for new construction than those having money to invest. Investments can generally be found in other lines and are not dependent upon railroads. No community, however, can be prosperous without railroad transportation, and it would seem, therefore, to be to the interest of the people if their representatives in the legislature would give to the subject careful thought and conservative but courageous treatment, to the end that railroad construction in the state be resumed and those railroads already constructed be enabled to give the people better service.

In other parts of this volume unfriendly critics of the railroad have been quoted. It seems, therefore, only fair to allow this great interest to speak for itself. In time Texas will solve this problem as it has solved many others. At present

prejudices must be overcome, misinformation corrected, suspicions allayed, an open-minded facing of the question encouraged. Politics is here playing with property, and under our system of government such a situation seems always attended by a sea of troubles.

CHAPTER XIII

POLITICS AND POLITICAL LEADERS

“What are we here for if not the offices?”—*Webster Flanagan of Texas in a National Republican Convention.*

G OVERNOR O. M. ROBERTS was fond of declaring that the people of the Republic of Texas became a state of the United States by free choice, and not because they feared they could not maintain the independence which Mexico offered to respect. But one cannot be sure that the feeling that the Mexicans would again be forgetful of the promise of Santa Anna not to interfere with Texas was not lurking in many breasts when the question of annexation was submitted to a vote in 1845. “Annexation is a word of new import in the political vocabulary of America, to form a subject for the speculation of the statesmen and the intellectual labors of the sage,” said Anson Jones, the last President of the Texas Republic, in his valedictory address. “Nations have generally extended their dominions by conquest; their march to power involved bloodshed and ruin, and their attainment of it was often followed by suffering and calamity to a despairing and subjugated people. It was left to the Anglo-American inhabitants of the Western Continent to furnish a new mode of enlarging the bounds of empire by the more natural tendency and operation of the principles of their free government.”

Careful readers of Texas history cannot fail to be impressed with the feeling that annexation to the United States—in fact, the entire broad program of Texas history until the time of statehood—was lurking in the minds of many of the early settlers when they came to Texas, even extending back to the time when impresario grants were being made by the Mexican Government. Texans were from the beginning what we would now call hyphenated Mexicans; the Mexicans, in fact, first dubbed them “Texanos-Americanos.” There is a well-known story that Sam Houston, when making his first trip to Texas, said to a tavern-keeper in Arkansas: “I am on my way to help found a new empire in the Southwest.” The empire was founded, and not many days elapsed after the battle of San Jacinto before plans were being made to surrender Texas by peaceable assimilation into the Government of the United States. At that time only ninety-one Texans voted against the proposal to go into the Union, but the United States was not ready to adopt the child she had helped to set free.

Texas finally came into the Union with a provision that: “New states, of convenient size, not exceeding four in number, in addition to said State of Texas, and having sufficient population, may hereafter, by the consent of said state, be formed out of the territory thereof, which shall be entitled to admission under the provisions of the Federal Constitution.” The question of dividing Texas has come up for serious discussion among the people a number of times. Under the stimulus of legislation adverse to a particular section of the state, or through the activities

of ambitious office-seekers, at times the interests of citizens who live in west Texas seem to conflict with those who live in the timbered district of east Texas. Another more serious disturbing factor has been the prohibition question. North and northwest Texas constitute the "dry" belt of the state, while south and southwest Texas, with a large percentage of population German, Mexican, and negroes, usually vote the anti-prohibition ticket. The negroes and the Mexicans are pliant tools for those who wish to retain the saloon; the German, splendid citizen as he usually is, really wishes his beer and resents interference with his European Sabbath. Politicians are always found ready to seize on the wishes of the dissatisfied people and pretend to meet them by multiplying the offices that four Texas would create. Contrariwise, the big state educational institutions calling their students from every section, and the pride of the people in a state incomparable in the extent of its territory, are two of the great forces tending to combat the disposition which develops at times to divide Texas into four states with a line running north and south, and another running east and west. The possibility seems never to have been discussed to divide Texas into the five states allowed by the terms of its admission into the Union.

Throughout the days of the Republic and during the first years of statehood there were few political differences in Texas. Of course the ambitions of some men came in conflict with the ambitions of others, and there were often diverse opinions about local policies; but the people of Texas were too intent on troubles at home to be much

affected by national questions. During the days of the Republic there was an increasing public debt which served as a constant irritant to every administration; the Indians, provoked by Mexican leaders who had no love for Texas, were on the warpath a large portion of the time; the Republic suffered from invasions from Mexico, and itself sent out several retaliatory expeditions; another vexing question was the dispute with the United States over the boundary between Texas and New Mexico; finally, the President of the Republic was ineligible to immediate reelection, and the country, therefore, suffered from frequent changes of administration. All these troubles, most of which were continued through the first period of statehood, made Texans think of home and its immediate problems rather than pay much attention to those of national importance. In the early fifties, however, questions involving slavery and the integrity of the Union began to gain the attention of the public; and in 1855 one of the two Congressmen elected from the state belonged to the Know-nothing party. Immediately prior to the war there were sharp political differences in the state over the question of secession. Sam Houston, a strong Union man, boldly opposed the secession movement, warned the people of what would happen, and finally was forced from his position as governor because he would not yield to the overwhelming desire of Texas to leave the Union.

When the Civil War came, Governor Roberts says, "every one enlisted except the very old men, the lame, the blind, the disabled, with some doctors and preachers, and officers of the state."

During the war, naturally, there was but one party in Texas, just as there is only one party of any considerable influence in Texas to-day. The Democratic majorities in Texas are as large and as sure as the Republican majorities in Pennsylvania. When the war ended and the ballot was put into the hands of the negro, the Republican party, under the leadership of Union sympathizers and the carpet-bag element that flowed into the state, came into power. J. W. Throckmorton defeated E. M. Pease for Governor in 1866 by a large majority. Throckmorton was, however, removed from office as "an impediment to reconstruction." At the next election, in 1869, all Confederate soldiers and officeholders during the Civil War had been disfranchised, and two Republicans, E. J. Davis and A. J. Hamilton, opposed each other for Governor. Four years later Richard Coke, a Democrat, defeated Davis by forty thousand majority. Davis refused to submit to the election, and appealed for aid to President Grant. Coke and his friends took forcible possession of the upper floor of the Capitol Building, while Davis and a company of negro troops occupied the lower floor. For a short time, then, Texas had two Governors. About this time Judge Hardin Hart of Greenville, a somewhat noted character of those days, was serving as district judge. Wishing to leave the office, he sent in his resignation to both Governor Davis and Governor Coke, remarking to a friend, "If that ain't enough to kiver the case, I'll send 'em duplicates."

Governor Davis had been a Federal officer during the Civil War, and was in entire sympathy with the Reconstruction element in power at Washington. Backed by a strong

military force in Texas, he appointed while Governor 9,500 people to office, many of them illegally. There was a reckless expenditure of money and an equally reckless issuance of bonds, amounting to \$3,000,000, drawing a high rate of interest. More over, the ill-feeling aroused by him produced feuds in many parts of the state, and the present unpopularity of the Republican party in Texas and the small vote it still receives dates from the Civil War and from Reconstruction days, particularly the latter period. In 1880, it is true, Mr. Davis received 64,000 votes for Governor against a vote of 166,000 for O. M. Roberts. Since that time, however, Republicanism in Texas seems to have been largely an organization preserved for the purpose of securing jobs in the Federal service when a Republican national administration is in power. On several occasions the Republicans have combined with the Populist party or the Greenback party in an effort to defeat the Democrats. At one time during recent years the Republicans split into two parties—one known as the “Lily Whites,” because they refused to admit negroes into their conventions, and the other known as the “Black and Tans,” because of a more liberal attitude toward the colored man. Under a Republican President many prominent Republicans of the state who cared for public office have been accommodated. A young college man in explaining to a close friend his change to Republicanism said: “Frankly, I wish to hold a Federal position; my chances of securing it seem much more likely as a Republican.” The largest vote polled by any Republican candidate since the war was that of John M. Simpson of Dallas, his vote being 73,000 out of a total of 300,000 votes cast.

The Democratic party held its first state convention in 1857. Two years later, however, Sam Houston, running as an independent, was elected over a regular Democrat. Sam Houston, with the exception of Joseph W. Bailey, has the distinction of being the only Texan who has ever been prominently mentioned for President, running in the Convention of 1860 a close second to Bell, the nominee of the Constitutional Union branch of the Democratic party. At times since the war Democratic rule has been seriously threatened by the Populist party. In the election of 1896, for example, Jerome C. Kerbey of Dallas received a vote of 238,000, only 50,000 less than the Democratic candidate, Charles A. Culberson. At this election the largest vote ever cast in the state was recorded—540,000. Under the present primary law in Texas candidates are weeded out to one representative from each party during the summer; as a consequence, many more votes are polled at the primaries than on election day in November. In 1906, for example, only 184,000 ballots were cast out of a possible 600,000.

It is manifestly impossible to review here the successive administrations in Texas. Only the work of a few of the later Governors—men of outstanding ability and strong enough to put through constructive policies—may be briefly referred to. Richard Coke found the state in 1873 in disorder, overrun with lawless men, broken up by feuds, and its public affairs a pitiful wreck financially. His rangers killed or put in jail the lawless, broke up the feuds, and improved frontier conditions. The expenses of the government were cut down, and the way was prepared for O. M. Roberts, who became Governor in 1878. His rigid economies, inflexible de-

termination to keep out of debt, and boldness in buying up state bonds at a high premium and refunding them with 6 per cent. bonds, provoked violent criticism at the time, but has brought him fame in later years. The work of James S. Hogg has been mentioned elsewhere in this volume. Surrounded by a group of department heads who were his strong friends and whom he organized into a cabinet, a man of the people who was the father of a number of constructive laws for their benefit, his career as Governor from 1891 to 1895 is probably the most noteworthy in the political history of the state. "When he was in the heat of battle over his different measures," says a prominent Texan, "I did not agree with him. Time has convinced me that as to all of them he was right." Through his influence bulwarks were erected against frenzied finance, greed, and graft, that will be as enduring as the gratitude of the people whom he unselfishly served. Charles A. Culberson, who followed Governor Hogg, was a man of brilliant mind, a careful executive, a good financier, who paid much more attention to detail than his predecessor in office. Although distinctly conservative, he was the first Governor bold enough to veto an entire appropriation bill which he thought excessive. Furthermore, his daring to call a special session of the legislature to stop the Corbett and Fitzsimmons prize fight on Texas soil brought him into national attention, won thousands of supporters in Texas, and made it easy for him to defeat for the United States Senatorship (an office which he still holds) such older and better known men as John H. Reagan and Roger Q. Mills.

Several of the first group of Governors who served Texas

were prominent in the war with Mexico. The Civil War, likewise, gave prominence and popularity to a second and larger group, the last of whom was S. W. T. Lanham of Weatherford. Texas will not likely again have another ex-Confederate in high public office.

Space forbids extended mention of the men who have represented Texas in the National Congress. Roger Q. Mills, John H. Reagan, Richard Coke, Charles A. Culberson, J. W. Bailey, and others have been as highly esteemed in Washington as in Texas. Of A. W. Terrell, Minister to Turkey during Cleveland's administration, Attorney-General Gregory says: "He is in my judgment the greatest of all lawmakers in our state. Among the things he accomplished was the perfection of the jury system under chaotic conditions after the war; legislation creating the University of Texas; legislation relating to the construction of the state capitol, and the proper support of the eleemosynary institutions of the state. He was unquestionably the forerunner of all as to the railroad commission and in the matter of regulating corporations."

The last two Governors of Texas, Thomas M. Campbell and Oscar B. Colquitt (one "pro," the other "anti"), are now candidates against each other for the United States Senate. Both men are running on their records as Governor. During Governor Campbell's administration a "full rendition" tax law was passed which, depending largely on lower officials for enforcement, has not brought the results its author hoped. Another law making for the first time the intangible property of railroad corporations subject to taxation has added many millions of dollars to the tax rolls. The

anti-free-pass law, so long advocated by Governor Hogg, was enacted, as was likewise a statute guaranteeing the deposits of state banks. Taking advantage of a huge fine, \$1,700,000 collected from the Waters Pierce Oil Company for violating the anti-trust law, Governor Campbell was able to reduce the state tax to the lowest point in its history—four cents on the hundred dollars. It should be said for Governor Colquitt that his two administrations suffered from heated discussion growing out of the prohibition question, making constructive legislation of great difficulty. Effective penitentiary reform had a warm advocate in Governor Colquitt, the results being the abatement of the system of leasing convicts, forbidding their whipping, and discontinuing the wearing of stripes except as a punishment for the most hardened criminals. Under both these men beneficial public school legislation, especially improvement of the rural schools, has been brought about. While Mr. Colquitt was Governor, a Home for Confederate Women in Austin, to supplement the Home for Men, became a charge on the state, as well as a Home for Consumptives at Carlsbad. More convicts were pardoned by Governor Colquitt than by all former Texas Governors.

The present Governor, James E. Ferguson, illustrates in his political career the opportunity afforded in a democracy of winning high public office without previous political training or prestige. When he announced his candidacy he had few acquaintances outside of his home county. He was a successful farmer, stockman, and banker, and was elected over Thomas H. Ball, a former member of Congress and a lawyer of repute. A tenant law forbidding

landlords to charge rentals amounting to more than one-fourth of the cotton and one-third of other crops was passed at his suggestion, and is now on trial.

Among the state's notable jurists is Robert S. Gould, who came from the Supreme Court to the University of Texas as professor of law; John Hemphill and Royal T. Wheeler, judges of the First Supreme Court, who, in the language of William H. Burges of El Paso, "served in a formative period. They blended the civil law which they found here with the common law which the English-speaking portion of the population of the new state brought here, thereby laying the foundation of the system of laws which has since prevailed in this state." Mr. Burges goes on to say, "Judge J. M. Hurt, as a member of the Court of Criminal Appeals, probably exercised more influence for good in the administration of the criminal laws of this state than any man in its history. A great intellect, and unfailing courage, and an integrity above question enabled him to exercise not only over his associates on the bench but over the trial judges, and the entire bar of the state, an influence that, in my opinion, was all for good." To which Attorney-General Gregory adds: "Judge Stayton was a judge pure and simple, and in later years did more to sustain the dignity of our courts than any man since Roberts, and as much as any man who ever sat upon the bench."

Judge Ben H. Rice, of the Court of Civil Appeals of the Third Judicial District of Texas, has summarized the distinct contributions of Texas to jurisprudence. In addition to being the pioneer in homestead legislation, the com-

mission form of government for cities, and the stock and bond law, Judge Rice says of Texas:

I also believe that the recent amendment to the Landlord and Tenant Act is novel and originated in this State. Its distinctive characteristic is to render the rental contract void, forfeit the lien and penalize the landlord, if he charges more than one-third of the value of the grain and more than one-fourth the value of the cotton raised on the land, where the tenant furnishes everything except the land; and where the landlord furnishes everything except the labor and the tenant furnishes the labor, and the landlord directly or indirectly charges a rental of more than one-half the value of the grain and more than one-half the value of the cotton raised on said land.

It is my opinion that Texas was the first common-law state to adopt the community property system. Louisiana has a similar law, and so has California; but the former has never adopted the common law and the latter followed the lead of Texas. It is also believed that we were among the first to abolish the distinction between law and equity, and administer both in the same court.

Texas likewise has the distinction of being the first state to abolish the common law forms of pleading, and to permit the plaintiff to set forth his cause of action, and the defendant his defense, without reference to form.

If not the first, we were among the very first, in 1856, to enact a penal code and code of criminal procedure, and to declare thereby that in order that the system of penal law in force in this state may be complete within itself, and that no system of foreign laws, written or unwritten, may be appealed to, it is declared that no person shall be punished for any act or omission, unless the same is made a penal offence, and a penalty is affixed thereto by the written law of this state.

Neither this chapter nor this volume pretends to be history. To-day, however, can be understood only in the light of the past, and much material of an historical character has therefore been scattered through the foregoing pages. The exciting differences leading up to the Civil War with its four years of suffering and many years of Reconstruction



GOVERNOR JAMES STEPHEN HOGG (1891-1895)
Creator of the Texas Railroad Commission and author of the Stock and Bond Law



Photograph by the Elliots

GOV. JAMES E. FERGUSON

“Who first brought the evils of tenantry to the attention of the people, who enthusiastically signed the million-dollar appropriation for rural schools, and who is the only governor of Texas who ever shipped a carload of cattle to market”

indignities have been purposely omitted. Other matters of considerable importance have also been omitted or merely mentioned because there are limits to what may be said in one volume. One might fill a book with the story of free grass and fence cutting; with the Hogg and Clark campaign; with the rise, growth, and dominance of so-called populist doctrines. Interesting developments occurred in Texas even during the period of legislative quiet while Joseph D. Sayers and S. W. T. Lanham were governors. Something might have been written about Texas drouths and rain-makers; more about great fires and storms and floods; more about legislation both wise and unwise. Pessimistic attention might have been directed to a false point of view that has left malaria and hookworm and patent medicines unregulated by law and filled the statute books with tick eradication, pure fertilizer, and stock feed control legislation. But inclination and the orders of the publishers both conjoin in making the "Book of Texas" optimistic. The spirit of Texas is yet buoyant, youthful, courageous, though there be some unworthy pages in its short history. It is ours to leave these pages partly unopened.

As to the future, if additional capital is not secured through the removal of the bar in the Robertson Law, insurance money will come from other sources. The opportunities for acquiring wealth in Texas must prove attractive to investors. Railroad building will continue and the rates so modified that this great civilizing force will be allowed a reasonable return on investments. Rural life will be made more attractive through the building of good roads, sadly needed throughout the state. Already many counties are

issuing road bonds and a few are fairly well equipped with well-kept public highways. The state will probably find a way to aid the counties in road building. In 1857 Texas appropriated \$300,000 for river and harbor improvements. Nowadays millions come almost every year from the United States, much of it for deepening the harbors at Port Arthur, Aransas Pass, and Galveston, though large sums go for improving rivers that many people believe will never be navigable. Houston a few years ago paid half the bill for cutting the Ship Channel, and now Dallas proposes a similar arrangement if the National Government will continue its efforts to open the Trinity to water traffic.

At present all state higher educational institutions are supported by a biennial appropriation from the legislature. At some time, though it may be in the far future, the people will vote upon themselves a tax sufficient to care properly for these institutions, and counties will be allowed to tax themselves so that every rural school may have a six months' term. Many intelligent men claim that the constitution of 1876, under which the state is still operated, is an outworn document, some of its provisions obsolete, others inconsistent with each other, many not enforced even in spirit. It is likely that the demand for a new constitution will grow and that needed laws, now impossible to secure by direct legislation, will come all in a lump through a new constitution better fitted to modern conditions. Meanwhile, Texas will continue to grow, and Texans will forever continue to be proud of their state. As an old frontier song says:

“Whiskey is whiskey, any way you mix it;
And Texas is Texas, any way you fix it.”

(WHERE THE WEST BEGINS

Out where the handclasp is a little bit stronger,
Out where the smile lasts a trifle longer—

That's where the West begins.

Out where the sun shines a trifle brighter,
Where the snows that fall are a trifle whiter,
And the bonds of home are a wee bit tighter—

That's where the West begins.

Out where the sky is a trifle bluer,
Where friendships formed are somewhat truer—

That's where the West begins.

Out where a fresher breeze is blowing,
Where there is laughter in every stream that's flowing,
Where there is more of reaping and less of sowing—

That's where the West begins.

Out where the world is in the making,
Where fewer hearts with despair are breaking—

That's where the West begins.

Where there's more of singing and less of sighing,
Where there's more of giving and less of buying,
And a man makes friends without half trying—

That's where the West begins.)

THE END

APPENDIX

APPENDIX

It is both a duty and a pleasure to acknowledge much help from printed pages and from people in the preparation of this volume. Books, magazines, pamphlets, newspapers, and leaflets have been consulted, and various persons have aided by word of mouth and by letter. In particular, the illustrations are due to the generosity of many. The non-technical character of the book renders unnecessary a formal bibliography. To the references made in the text it is a pleasure to add the names of those who through their published writings, their personal letters, or their spoken words have helped:

Professor J. B. Bagley, Agricultural and Mechanical College of Texas

Vernon Bailey, U. S. Department of Agriculture

Dr. E. C. Barker, University of Texas

H. B. Beck, University of Texas

C. P. Benedict, Midland, Texas

Adolph Boldt, Houston, Texas

Dr. W. L. Bray, Syracuse University

J. B. Carrington, San Antonio, Texas

R. B. Creager, Brownsville, Texas

C. M. Cureton, Assistant Attorney-General of Texas

F. W. Davis, Texas Commissioner of Agriculture

Walter Dealey, *Dallas News*, Dallas, Texas

James E. Ferguson, Governor of Texas

H. E. Fitzgerald, University of Texas

Fort Worth Board of Trade, Fort Worth, Texas

E. S. Gassett, National Bank Examiner

R. A. Greer, Beaumont, Texas

C. G. Haskell, U. S. Irrigation Survey

Colonel F. P. Holland, Editor *Farm and Ranch*, Dallas, Texas

Rev. H. G. Horton, Seguin

Dean E. J. Kyle, Agricultural and Mechanical College of Texas

S. C. Lackey, Cuero, Texas

C. K. Lee, Fort Worth, Texas

- Dr. E. T. Miller, University of Texas
W. E. Leonard, University of Texas
Dr. I. M. Lewis, University of Texas
Major George W. Littlefield, Austin, Texas
R. O. McCormick, Fort Worth, Texas
William Morgan, Galveston, Texas
Professor J. C. Nagle, Chairman Texas State Board of Water Engineers
J. P. Nash, Bureau of Economic Geology, University of Texas
Rufus J. Nelson, *Farm and Ranch*, Dallas, Texas
The Texas Almanac, *Dallas News* (various editors)
W. M. Odell, Cleburne, Texas
R. D. Parker, Expert Engineer, Texas Railroad Commission
John S. Patterson, Commissioner of Banking
President W. B. Phillips, Colorado School of Mines
Professor C. S. Potts, University of Texas
Fred C. Proctor, Beaumont, Texas
W. F. Shaw, Mercedes, Texas
George Finley Simmons, Houston, Texas
Dr. F. W. Simonds, University of Texas
John Lang Sinclair, Artesia Wells, Texas
W. G. Sterett, *Dallas News*, Dallas, Texas
Arthur Stiles, Texas State Reclamation Engineer
David S. Switzer, Oak Cliff, Dallas, Texas
Dean T. U. Taylor, University of Texas
Professor W. S. Taylor, University of Texas
R. E. Tomason, El Paso, Texas
Parker Trask, Corpus Christi, Texas
Dr. J. A. Udden, Director Bureau of Economic Geology, University of Texas
George S. Wehrwein, University of Texas
F. C. Weinert, Austin, Texas
E. P. Wilmot, President Austin National Bank
E. W. Winkler, Reference Librarian, University of Texas





LIBRARY OF CONGRESS



0 014 543 743 A